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BOSTON UNIVERSITY
GRADUATE SCHOOL

Thesis

THE INTERRELATIONSHIP BETWEEN TEXTBOOKS
IN GEOGRAPHY AND THE SCIENCE AND
PEDAGOGY OF GEOGRAPHY

by

Mary Alice Cashen

(B. S. in Ed., State Teachers College at Worcester, 1941)

submitted in partial fulfilment of the
requirements for the degree of
Master of Arts

1942

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APPROVAL PAGE

Approved

by

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Professor of *Education*.

Second Reader.....*Franklin C. Roberts*.....
Professor of *Education*

1870-1871

(1870-1871)

1870

Received of the Treasurer of the
Board of Directors of the
City of New York

the sum of \$100,000
for the purchase of land
for the City of New York

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THE
OFFICE OF THE
SECRETARY OF THE
TREASURY
WASHINGTON, D. C.
JANUARY 1, 1900
TO THE
HONORABLE
COMMISSIONER OF THE
INTERNAL REVENUE
WASHINGTON, D. C.
SIR:
I have the honor to acknowledge the receipt of your letter of the 29th inst. in relation to the matter of the proposed amendment to the Internal Revenue Code, and in reply to inform you that the same has been forwarded to the proper authorities for their consideration.

Very respectfully,
Your obedient servant,
J. M. [Signature]

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Chapter I

INTRODUCTION

Purpose of The Study and Method of Pursuing It.

In few subjects of the school curriculum has there been, during the last century, such a complete change in the objectives for teaching, content matter, and relationships and inter-relationships with other subjects, as in the subject of geography. These changes are the more remarkable in that they are so complete that many of the most basic facts required of children when the subject was introduced into the schools in the early part of the last century are not considered at all fundamental today, and are taught only as motivation to arouse interest or as material for appreciation.

In arithmetic there has been little change until the last score of years. Now the trend is toward elimination of much useless material from the drill load of children in the grades, and restriction of required skills to those which have been found, on the basis of actual evidence, to be among those used in average adult life. In spelling, the load has been much reduced, and method has been developed to the point where oral spelling is now eliminated and spelling is tested in real life situations where lack of knowledge would be a definite handicap. The person who can stay up longest in oral

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spelling matches is no longer necessarily the best speller in the room. But in arithmetic the child must still learn to add, subtract, multiply, and divide whole numbers. In spelling the child must still know how to spell the most commonly used words of the average vocabulary. In history there has been much change and development in method. Pupils are no longer asked to memorize a list of one hundred dates; much of past history is placed upon an appreciation basis, instead of on a memory basis. But history still deals with the same episodes and influences, together with those which have since occurred, that it dealt with fifty years ago.

In geography, on the other hand, many of the facts which were used in the first lessons, in the early history of geography as a school subject, are never introduced at all, until the specialized, elective geography at the university level is reached.

Geography in school is based on geography, the natural science. Two important educational aspects seem to be, first, the body of aims, concepts, and method which has been developed; and second, the instruments of teaching, including maps, globes, charts, etc., but by far most important, geography textbooks. The importance of texts in the classroom is brought out by the consideration of how few teachers in the elementary and secondary schools have had any particular qualifying background and preparation for the teaching of geography. Leaving out, therefore, the human factor of the individual teacher, we

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have three primary influences contributing to the child's knowledge of geography in school. They are the science of geography, geography method, and geography textbooks. All subjects in school have been subjected to change as a result of development of principles of education. Geography has undergone changes due to this cause but also it has been influenced by the great development in the body of geographic knowledge through the centuries.

The purpose of this thesis is to trace the changes and development in the body of the science of geography, in the aims, concepts, and method of teaching geography, and in geography textbooks, in so far as these facts tend to clarify the interrelationship in the development of all three. The reason for this delineation is to discover whether or not method in geography and textbooks in geography at the time of their development were derived from the science of the same time, and were therefore up to date at the time they were used; to discover also whether method and textbooks have developed concurrently or whether one has lagged behind the other; and, if possible, to discover whether method in geography has been derived mainly from textbooks or whether it has arisen independently of texts, from the science of geography and from general principles of education.

The second chapter of the thesis will outline the development of the science of geography and method in geography. The third chapter will deal with the study and analysis of the most significant and contributive textbooks in geography

published in the nineteenth century and the first forty years of the present century. The fourth chapter will summarize the results of the study and present the evidence to answer the questions of interrelationship proposed in the purpose of the thesis.

There have been several other studies of geography texts in the last few years. Roseberry¹ emphasizes the curriculum content rather than the method of teaching, in her study. Brown² analyzes the questions and exercises in elementary geography textbooks, in order to correlate present principles of education with textbook make-up. She does not present a historical view of the development of either factor. Davis³ studies the pictures in elementary geography texts, but makes no attempt to measure the texts in relation to method.

In the present paper the texts used for study will be selected from the collection of geography texts at Clark University, Worcester, Massachusetts. The reasons for specific choice and the numerical limitation will be explained in Chapter III.

1. Roseberry, Elizabeth E. An Analysis of Textbooks in Elementary Geography. Master's Thesis, University of Chicago, Chicago, 1931.

2. Brown, Velma. Analysis of Exercises in Elementary Geography Textbooks. University of Chicago, Chicago, 1931.

3. Davis, Harriet F. The Relation of the Pictures of the Text in Two Types of Elementary Geographies. Master's Thesis, University of Pittsburgh, 1930.

Chapter II

THE DEVELOPMENT OF GEOGRAPHY AS A SCIENCE AND OF THE PEDAGOGY OF GEOGRAPHY

Since geography is the sine qua non of this paper, it would seem logical to start by answering the question, "What is geography?" Perhaps it may be considered even more logical, however, to trace first the development of geography as a science. Any definition or concept of a subject naturally evolves from the complete body of knowledge available at the time. In asking the question of the nature of geography, we are using the present tense. We mean, "What is geography today?" A knowledge of the history of geography is as helpful to an understanding of present-day definitions as it was necessary for their formulation. The tracing of the evolution of definitions of geography is similarly aided by the tracing of the history of geography. All definitions, past and present, are made meaningful by the knowledge of the subject background. Therefore, the development of geography as a science will precede and lead to the definition of the subject.

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The Development of Geography

Geography in the Ancient and Medieval World.

The average person today would say that the earth was proved round by the voyage of Magellan, and that Christopher Columbus belonged to a very exclusive school in subscribing to this philosophy. Few would know that as early as 580 B.C. Anaximander proposed the theory of the rotundity of the earth, and that Pythagoras and his followers accepted it fully. Aristotle is often called the founder of scientific geography because he worked out several proofs of the roundness of the world which are evident to every one from common experience. He cited the tendency of objects to fall toward a center; the invariable circularity of the shadow of the earth during a lunar eclipse; the rhythmic shifting of stars and appearance of constellations. In 450 B. C. Parmenides had appreciated the importance of the equator by conceiving the idea of parallel belts of climate, and corresponding belts on each side of the equator.

Ptolemy was the first person to sense the relationship of geographical phenomena. He collected all the known facts of geography in an effort to describe the earth as a whole unit. To him we owe the knowledge today of the principles worked out in ancient times, for it was his work, accepted and carefully preserved in Arabia, which was the connective link during the renewal of interest in geography during the age of discovery.

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IN WHICH ARE CONTAINED
THE MOST IMPORTANT
AND INTERESTING
CIRCUMSTANCES
OF HIS REIGN
FROM THE BEGINNING
OF HIS REIGN
UNTIL HIS DEATH
IN THE YEAR
OF OUR LORD
1649

BY JOHN RICHARDSON
OF THE MIDDLE TEMPLE
ESQ.

Geography in Europe.

When people began to voyage and to establish routes of trade, even of local nature, reliable directions were much in demand. Maps became realities as far as the coastline and general form of land masses were concerned. They were very detailed in regard to capes, bays, harbors. With increase in travel and the rise of towns, roads and settlement locations on land increased in importance. The development of industry and commerce added lists of manufactures and crops to information for merchants and mariners.⁴ During this period, in 1650, a book was published by Bernard Varenus called Geographia Generalis, which may still be studied with profit. It remained the prime authority on geographic questions for a century. It was a general geography treating of the world as a whole; it was especially informative about the form and dimensions of lands lying to the east of Europe, and also included the climatic zones of the world, and the relationship of physiography to climate and geology. In it, however, there is no hint of the human factor.

Baron Frederich von Humboldt, 1769 to 1889, was the first geographer who ever wrote from actual experience, and who travelled over almost every region of which he wrote. He is the first geographer to utilize field work, now considered the basis for all work in geography. Not only did he add much to

4. Fleure, H. J., "The New Outlook in Geography", Journal of Geography, September, 1934. 71:296-298

geographic knowledge in the way of exploration, but he gave to the world his Cosmos, one of the most valuable contributions to the development of natural science ever published. Cosmos gave a new unity to the forces of nature which influence the activities of man. A contribution of his usually overlooked but undeniably extremely important to all branches of geography was the theory of the isotherm, or line on which all points have the same temperature.

Carl Ritter was a contemporary of Humboldt who emphasized the importance of avoiding hasty conclusions by not basing a principle on the study of a single region but on the comparison of several regions. Kant was one of the first to regard the relationships of environment to mankind as the essence of geography. Ritter also seemed to sense the influence of climate and relief on human movements.

Others took up the idea of relationships between the earth and mankind to such an extent that the theory of determinism or impotency of mankind in the face of the influence of nature became rather popular. Vidal de la Blache thought that in almost every case nature offered to man several choices and the kind of people determined the exact type of civilization.⁵

Geography in America

Carl Ritter began to teach geography in the University of Berlin. He was greatly influenced by Humboldt and also by Kant,

5. Fleure, H. J., "The New Outlook in Geography", Journal of Geography, September, 1934. P. 296

and through his teaching the most important geographic principles spread to the rest of Europe and to America.⁶ When geography reached a stage of development in America where new concepts were added to what was learned from Europe it took a path very different from its predecessor. Until very recently American geographers have tended to divide the subject into separate sections: physical, economic, political, and historical geography. In Europe there has always been a more integrated concept--all cultural aspects are related to all physical and natural aspects, on a regional basis.⁷

In regional geography each region is a particular area defined because of its natural unity: unity of structure, climate, resources, cultural pattern. The study of regional geography divides the world into natural regions; the characteristics peculiar to each are contrasted and compared with those of other regions.⁸ This regional concept has led many geographers to adopt theories closely related to determinism. But, given similar natural regions, entirely different cultural patterns have often evolved, whose number and type depend solely on the human factor. The removal of rubber from its

6. Thirty Second Yearbook of the National Society for the Study of Education. Public School Publishing Co., Bloomington, Ill., 1933. P. 442.

7. Bowman, Isaiah, Geography in Relation to the Social Sciences, Part V, Report of the Committee on the Social Studies, American History Society; Charles Scribner's Sons, 1934. P. 234.

8. Fairgrieve, James, Geography in School, University of London Press, London, 1937. P. 38.

natural Amazon Basin habitat to Malaya, to such an extent that now the latter almost monopolizes world production of rubber and the former is the world's greatest coffee country, exemplifies the matter of human choice in determining cultural patterns. One article from the Yearbook of the Royal Geography Society for the Year 1886 voices an objection to teaching on a regional basis often heard today.⁹ The author thinks that the regional concept tends to give a rounded picture of isolated regions but disintegrates the unity of the earth as a sphere and thus it does not give a broad view. Harlan H. Barrows and Edith Putnam Parker at the University of Chicago have done much work in the field of regional geography. They assert that the primary objective of teaching elementary geography is to emphasize the application of geography to the immediate problems of life, and they contend that the only way of accomplishing this objective is to teach geography on a regional basis. "In order to realize this objective it is necessary to deal from the beginning to the end with the relations of specific groups of people to their natural environments."¹⁰

J. Russell Smith should be mentioned in any discussion of regional geography. He selects certain geographic factors found universally wherever a particular type of cultural

9. Davis, W. M., "The Progress of Geography in The School", Royal Geography Society Education Reports, Yearbook for 1886. London, 1886.

10. Barrows, Harlan H., and Parker, Edith P., "Elementary Geography: Objectives and Curriculum", Elementary School Journal, March, 1925. 25: 493-506.

pattern results. For instance, the 70° isotherm for the summer months is one essential factor in the limitation of the corn belt. Wherever the whole set of geographic factors fits a particular region, there one will find the corresponding cultural pattern. Wallace W. Atwood, President of Clark University, bases his regions on more permanent factors, mainly topographic, including climatic influences. He has four main "type" regions, within which certain occupations and industries are universally possible and probable. His "types" are the plains, plateaus, old worn-down mountains, and young rugged mountains. It does not seem that these two views are in opposition. Both men would recognize the corn belt as a natural region. The approach would be different. Smith's classification would explain better than Atwood's why corn is grown on one plains area, and wheat, spring and winter, on other plains areas. It might be concluded that Atwood's concept is more generalized, and is based on permanent, fundamental principles, while Smith's concept is more applicable to smaller, more specific natural regions.¹¹ In recent years, the regional basis of geographic study and research has been accepted in the United States by the majority of geographers.

One of the earliest American geographers was Thomas Hutchins. While he did not contribute outstandingly to the body of geographic principles and scientific knowledge, he was the first important geographer to interpret the United States in terms

11. Class notes, Professor Roberts. March, 1942.

The first part of the paper is devoted to a general discussion of the problem of the existence of solutions of the system of equations (1) for arbitrary values of the parameters α and β . It is shown that the system (1) has solutions for arbitrary values of the parameters α and β if and only if the conditions (2) are satisfied. The second part of the paper is devoted to a detailed study of the properties of the solutions of the system (1) for arbitrary values of the parameters α and β . It is shown that the solutions of the system (1) are unique and depend continuously on the parameters α and β . The third part of the paper is devoted to a study of the asymptotic properties of the solutions of the system (1) for large values of the parameters α and β . It is shown that the solutions of the system (1) approach zero as the parameters α and β approach infinity.

of these principles. His early life was spent in the English army, but at the time of the struggle with England his sympathy for the United States drove him from London. He became a friend of Benjamin Franklin in Paris, and then came with him to America where he joined the war as the geographer for the Continental Army. After the war he travelled over and surveyed much of the land in the South and spent years exploring and opening up the West. He became the first official Geographer to the United States, and was an adherent to the belief that the world was made for man and that man is greatly influenced by his environment. His value to America lay principally in the fact that his work formed the basis for the geography of Jedediah Morse whose works were the outstanding authority on the subject for the United States for almost a century.¹²

It is generally agreed that the Dean of the American school of present-day geographers, who today are leading the field all over the world in the extent and value of their work, is Ellen Churchill Semple. She specialized in the study of anthropogeography, the influence of environment on the development of the different races of men and their national life. Her most famous and valuable work was The Influence of Geographic Environment, about which Atwood says, "This book has shaped the whole trend and content of geographic thought in America, and

12. Op. Cit., #9, page 10.

has laid the foundation for the science which has since made such rapid progress".¹³

13. Atwood, Wallace W., "Obituary", Journal of Geography, September, 1932. 31:267.

1881

Received of the Hon. Secy. of the Interior
for the sum of \$100.00

Witness my hand and seal this 1st day of June 1881

John W. Smith

What is Geography?

It is easy to find out what a mountain is: a commonly accepted definition denotes it as an elevation in the earth's surface with a minimum of summit level; it is far less easy to find out what geography is, because men have never agreed on the answer. There is no way to prove some men right and others wrong. It is possible, however, to select from the numerous definitions a few which seem to be more widely accepted than the others and to at least definitely realize which factors are universally accepted, and to organize the points of contention.

Early Concepts.

The Greeks who gave the name geography to the science gave thereby the first and most widely accepted definition: the literal translation, the description of earth. Almost everyone who travels gives at some time a description of the earth. Surely such descriptions make up the "raw material of geography".¹⁴ But we are dealing with a science. The very term connotes an orderly, systematized, related body of facts. There is no such implication in such a definition.

"Geography is the Science of Distributions".¹⁵ This was another popular definition. Recognition of the subject as a

14. Op. Cit., #9, page 10.

15. Ibid., page 14.

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science improves this definition, which infers relationships between geographic factors. The word distributions was rather unfortunate, since it gives an impression of lists of the cities, towns, rivers, and mountain ranges of the world.

Later Definitions.

Today a geographer's definition depends a great deal on his field of specialization. The ecologist, opposing determinism, believes that each region offers many opportunities. He studies the adjustments and adaptation of life to environment. His definition states just that: Geography is human ecology in that it is largely a study of the adjustment of the organism to the environment.¹⁶

Those who are primarily interested in elementary education teach that there is no such thing as an isolated geographic fact; such facts can be classified in other natural sciences, climatology, geology, physiography, and so forth. Expressed relationships between natural environment and humans are the only geographic facts.

Some geographers believe that isolated facts are definitely geographic and that, once established, upon them relationships are built. For them there is a geography of Antarctica, although there are no human relationships of permanent nature there.

The chorographers return to the descriptive basis for their

16. Parkins, A. E., "The Geography of American Geographers", Journal of Geography, September, 1934. 33:221-230.

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definition, defining geography as the science of areas, whose function it is to describe the natural and cultural features or landscapes of areas or regions.¹⁷ They would include in geography any explanation, including those of historical character, which explain the present human response, thus leaning toward the broader social-study concept.

Fairgrievs objects to the excluding nature of most of these definitions.¹⁸ He claims that it is a mistake to set man on one side and the whole natural environment on the other. He feels that all organic things should be on one side, animals and plants, and all inorganic on the other, climate, relief, etc. He also makes a plea for the inclusion of relief in the final definition, since relief forms are the basis of geographic environment to a large degree. For the student of geography an acceptable definition would include the fact that (1) isolated facts from the sciences are not enough; (2) climatology, geology, physiography, and the other natural sciences contribute scientific knowledge which explains the responses of mankind to his environment; (3) these responses are the important thing in the science of geography, because through them one learns the reason for his own life pattern and to understand and sympathize with those of other peoples.

17. Ibid.

18. Op. Cit., #9, page 10.

The Pedagogy of Geography

Early Methods

Ravenstein¹⁹, in 1885, makes a plea for uniting the child with his own particular environment. He lists some typical memory questions which heretofore had been required of children in elementary school. The emphasis obviously was placed entirely on memory questions. The "Description of the earth" was the complete definition for teachers of a century and a half ago. At a time when in the history of the science a controversy was going on between the school of determinists and those who felt that the environment offered a choice of adjustments to man, they taught geography in the state reached in 1500 by the science itself. They belonged to the "capes and bays" school, although they did not have the excuse of practical use of this knowledge which occasioned the character of geographic knowledge in 1500. The traditional aims in geography were practical and disciplinary. The practical aims resulted in the teaching of a number of locational facts, varying with the particular community. The disciplinary aim is evidenced by the questions commonly used in examinations: the emphasis was on training the memory by copious exercising. Discussion of world geography was organized in political units which have since been replaced by units of social use or natural regions.

19. E. G. Ravenstein, "Aims and Methods of Geography Education", from Op. Cit., #9.

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Later, with the growth of the importance of scientific teaching it was realized that mere memory training was useless and the subject was adjusted to a much broader basis. It was correlated with other sciences and became more orderly and related, with the chief appeal to reason rather than to memory.²⁰

Interpretation Trend.

By 1900 method in geography had caught up to Kant and Ritter in their advocacy of the causal relationship factor. There was still no change toward application of material to the child, but the human factor was recognized as essential.²¹ Barrows and Parker, referred to above as advocates of the regional concept in America, set up in 1925 the following objectives for teaching geography in elementary and secondary schools.²²

1. To emphasize the application of geography to the immediate problems of life.
2. To give the pupil a knowledge of the location and character of the leading surface features of the earth in their narrow relationships to human activity, but never as isolated facts.
3. To give sympathetic understanding of the conditions and problems of peoples of other countries.
4. To show the dependence of man on earth conditions and resources, and to bring out economic interdependence of peoples of different countries.
5. To point the way to better uses of land and natural resources.

20. Op. Cit., #9, page 10.

21. Op. Cit., #10, pp. 496-8.

22. Gibbs, "The Pedagogy of Geography", Doctor's Dissertation, Clark University, Worcester, Massachusetts, 1907.

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Fairgrieves calls this trend in methods the "story of man" geography and says that it "very distinctly tends to be sloppy and to encourage loose thinking". He would associate a combination of "story of man" geography and "scientific geography", as he names the previous unrelated fact teaching.

The World-Relationships School

One very popular function in the teaching of geography is the preparing of the children to understand the way of life of people all over the world, because in late years we have had so many more interrelationships with people in distant lands, due to modern inventions. One writer asks how children can be expected to follow the Golden Rule in regard to world affairs if they do not know how the people in other lands want to be treated. The fourth objective of Barrows and Parker deals with the interdependence of nations and the need for children to realize that through transport and communication the environment of almost every civilized people has come to embrace practically the whole world.²³ An appreciation of the unity of the earth will help the pupil become an intelligent citizen of the world. One of the aims of modern education as given by Garfinkel²⁴ is to develop respect for other peoples, and the significance of interdependence must be understood.

23. Op. Cit., #10, page 497.

24. Garfinkel, Maurice A., "Modern Tendencies in Teaching of Geography", Journal of Geography, May, 1934. 37:187-194.

Home Geography.

As early as 1831 S. G. Goodrich, author of the "Peter Parley Geography Stories for Children", realized the need for adapting geography to the child. He said, "We would begin at home, teach the geography first of the school room, then of the village or town, etc., to the entire globe".²⁵ It is only within the last few years that modern education has recognized this point. It would seem logical to follow the great principle of proceeding from the known to the unknown, but, on the other hand, there is still a dissenting voice in the geographers of today. Barrows and Parker admit that starting with the child's community is the logical introduction, but they contend that what is most familiar to a child is least interesting to him. It is wrong to present to him, first, geography in its most uninteresting phase, about which the child has no curiosity. Furthermore, relationships should first be pointed out in regions where they are direct and simple; for instance, the life of the Eskimo in his igloo. Life in the United States is too complex and relationships, especially in cities, are too indirect. They would advise the teacher to profit by the child's enthusiasm and go at once to distant lands. The strangeness of life in foreign countries prompts questions on the child's part and leads him to make comparisons with his own home life.

It is now understood that only by a thorough knowledge of his own community can the child measure the life patterns of other peoples. An even more important consideration is the fact that only by a complete understanding of his environment can the child best prepare to live in the manner most profitable to himself and to society; and only through this knowledge can he judge best where his own capabilities can be developed if he is dissatisfied with his present life.

The Type Study.

McMurray, in 1904, published two books on geographic method which, when read for the first time, may easily be accepted as recent publications.²⁶ He introduced the idea of teaching geography in the schools as a series of type studies. He considers this the second stage in the study of geography, the first being the study of the home and neighborhood. The type study is designed to introduce to the children the geography of a section representative of many similar sections in the same country or in different continents. It is the organization of a large body of geographic facts about a center of study.

"The number of classes of geographic objects is not very great, while the number of individuals in each class is legion.....Through mastery of important type objects the

26. McMurray, Charles A. Type Studies from the Geography of The United States, Macmillan Company, 1904; and Special Method in Geography, Macmillan Company, 1904.

student goes a long way toward the mastery of the whole field of geography."²⁷ The aim of this method of organization is to eliminate gorging the memory with geographic names and facts. Only such an organization permits a thorough study of causal relationships. The exhaustive treatment allows time for mastery of modifying and controlling influences. Only if the causal relationships are given does a subject have value as a type, and can knowledge of one type be applied to different regions. Therefore, we may say that McMurray's theory is the first outstanding exponent of the causal relationship movement.

The Problem Method.

A further modern attribute of geography teaching is the use of the problem method. Throughout the history of geography as a school subject the topical outline was the standard method. During the "scientific" geography era each country was outlined in regard to location, area, topography, climate, soils, plant and animal life, and human activities. When the causal relationships concept gained sway the same topical form was used, but relationships were pointed out in every case. In education as a whole the problem method has developed as the most nearly true life situation method. So in geography, the child reaches his maximum development when he independently works out the answers to real problems. Branom²⁸ discusses the problem

27. McMurray, Charles A. Special Method in Geography, Macmillan Company, 1904, page 5.

28. Branom, Mendel E., "The Problem Method of Teaching Geography", Journal of Geography, 19:233-242, September, 1920.

method of teaching geography. He emphasizes that the problem must be adapted to the child; it should be socially significant but also it should appeal to the child's interests and experiences. He warns against the easy method of camouflaging the old topical outline by changing the form of the topics to questions. There is no unity to such a series of problems. The general tendency seems to be the appeal to the child's reason rather than to his memory, stimulation to arouse him to investigate carefully and solve problems by himself, and thorough understanding first of his own community and geographical region as a basis for comparison and study of distant lands.

Appreciation Units.

It is coming to be more and more recognized that even today much of what is digested and memorized by school children as fundamental geography is not necessary as factual material in the average adult life. It is also now understood that geography is very much adapted from its very nature and appeal to the increase of enjoyment in school and in adult life, and to the development of interests which enrich every personality. Thus, while the problem method is undoubtedly best for many specific phases of geography, the appreciation technique in teaching is being substituted in a large percentage of classes. To few other subjects does the educational film lend more enjoyment and appreciation. Other visual aids make a great addition to the imaginings of children and are a step in the

direction of reality. Foster²⁹ says that in the case of appreciation, as opposed, for instance, to the problem method, the judgment is not of facts but of values. The essential conditions of a good appreciation situation, sympathetic instructor, real situation, familiar medium of expression, understanding of thought, a situation that appeals to the student, and a favorable classroom atmosphere, are seldom so ideally possible of achievement as in the subject of geography.

29. Foster, Herbert H. Principles of Teaching in Secondary Education. Charles Scribner's Sons, 1921.

I have not yet seen the "Report" which you mention
concerning the case of the student who was expelled from
the school for having been found in possession of
certain articles. I am sure that the school authorities
will be able to give you the full details of the case.
I am sure that the school authorities will be able to
give you the full details of the case.

Yours very truly,
[Signature]

Summary

In tracing the history of geography as a science and as a pedagogical subject one finds eras almost parallel in both. Since men started all over in the age of discovery with what was known centuries before Christ, one may start with that time to notice developments. In the science and the school subject one finds the era of memory, when lists of names of places and their location on maps or by boundaries made up the most important factors. In the science these names were useful in encouraging travel and commerce in the fifteenth and sixteenth centuries. In the school subject they were considered useful to train the memory. In both phases of geography is found the scientific fact era, then the causal relationships era. But the times of occurrence were very different. When Humboldt was exposing his scientific data the schools were memorizing the length and breadth of lava flows. When Kant was revealing the causal relationship aspect of geography, the schools were learning scientific data organized in topics.

It is encouraging to realize, however, that the discrepancies between the two divisions have been steadily decreasing, and that education is slowly catching up. It was four hundred years after the science of geography left the memory stage that education got to it. There was only about a century's difference between the eras of scientific fact. There was perhaps a difference in time of fifty to seventy-five years when

Journal

Journal of the American Medical Association, Chicago, Ill., June 12, 1914.

Dear Sir: I have the honor to acknowledge the receipt of your letter of June 10, 1914.

I am sorry to hear that you are suffering from the same trouble.

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education reached the causal relationship and human response milestone. There seems to be indicated a slight tendency for geographers at present to veer toward the theses of chorography, and to be swinging away from any hint of determinism. They are placing more and more responsibility for a given human response on man's choice. In case of such a development it will be interesting to see how long the discrepancy will be before the pedagogy of geography adjusts itself to these changing conditions.

Chapter III

STUDY OF THE TEXTBOOKS

Introduction

Choice of Texts.

In delineating the history of geography as a science and of the pedagogy of geography it was necessary to be very brief but it was also very necessary to omit no important phase of the history of these two factors which influenced their present day status. So, in the study of geography textbooks, it was important to omit no single text which made a significant contribution to the character of the present day geography text, and it was also necessary to include enough texts through all the years from the publication of the first text to provide sample representatives of the development in texts. The list of texts studied and the specific reasons for choice follow:

1. Parish, Elijah. A New System of Modern Geography, or a General Description of All the Considerable Countries in the World. E. Little and Company, Newburyport, 1814.

This book is typical of those of the time in memory training emphasis. Parish was an exponent of Geography as Distribution.

2. Morse, Jedidiah, and Morse, Sidney E. A New System of Geography, Ancient and Modern--for the Use of Schools. Accompanied with an atlas. Richardson and Lord, Boston, 1824.

One of the earliest geographers of America and his son collaborated on this valuable volume. It was one of the first authoritative texts used in American schools.

3. Worcester, J. E., Elements of Geography. Hilliard, Gray, Little, and Wilkins. Boston, 1827.

Worcester was one of the originators of journey geography. His book, therefore, is a good example of this method of presentation.

4. Parker, Richard Green. Questions in Geography, Adapted for the Use of Morse's Woodbridge's, Worcester's, etc., or any other Respectable Collection of Maps. Embracing by Way of Questions and Answers Such Portions of the Elements of Geography as Are Necessary for Common Schools. To Which is Added a Concise Description of the Terrestrial Globe. Harper and Brothers Publishers, 1855.

This text is an example of entire emphasis on mathematical and factual geography.

5. Swinton, William. Grammar School Geography--Physical, Political, and Commercial. Ivison, Blakeman, Taylor, and Company, New York, 1880.

Written during the rise of emphasis on physical geography, this book was meant to strike a balance between physical and political geography.

6. Guyot, Arnold. The Earth and Man. Charles Scribner's Sons, New York, 1890.

One of the earliest exponents of human geography, Guyot wrote a text otherwise typical of the physical geography period.

7. Frye, Alexander E. Primary Geography. Ginn and Company, Boston, 1894.

One of the earliest home geography texts, this book was a great advance over earlier and other contemporaneous texts.

8. Tarr, Ralph S., and McMurray, Frank M. A Complete Geography. Macmillan Company, New York, 1905.

This book is famous for its progressive viewpoint. It exemplifies home geography and the famous "type study."

9. Herbertson, F. D. The Clarendon Geography. Clarendon Press, Oxford, 1919.

This book is extremely rich in causal relationships.

10. Barrows, Harlan H., and Parker, Edith P. Journeys in Distant Lands. Silver Burdett and Company, 1924.

This book series is different and contributive in that the authors refute the home geography concept.

11. Atwood, Wallace W., and Thomas, Helen G. The Earth and Its People. Ginn and Company, Boston, 1938.

This book is one of the most widely known texts published in recent years.

Bases for Judgment and Comparison.

Each of the eleven representative texts chosen for study was carefully examined for the following eight points. These points may be regarded as bases for judging the texts.

1. The lack of emphasis on mathematical geography.
2. The lack of emphasis on factual material, as such.
3. The emphasis on causal relationships.
4. The recognition and significance of the human factor.
5. The degree of concordance with the principles of home geography.
6. The value and kind of study suggestions.
7. The quality and fitness of illustrations.
8. The quality and utility of maps and diagrams.

The first five of the bases were chosen because they occurred in the history of geography and of geographic pedagogy as important epochs. According to encyclopedic definition

mathematical geography may be divided into (a) astronomical geography, and (b) geodesy, topography, and cartography. In the use of mathematical geography as a basis for studying the texts in this thesis, astronomical geography is important in the early texts. Geodesy is a comparatively new phase of geography, and is most important in the preparation of topographic maps. Only recently has the Coast and Geodetic Survey Department been established in the United States. Topography and cartography are the aspects most stressed in later geography texts, if any mathematical geography is present. In the thesis, any geographic factual material, other than mathematical geography, which includes numerical factors is covered in Item 2 above. Thus, areas, latitudinal and longitudinal locations, distances in miles, numerical statistics on production, resources, and trade are considered factual geography if they are not presented on an appreciation basis.

The last three bases were included because they are so important in geography texts that without them no evaluation would give a true picture. In the last two texts studied, emphatic statement was made by the authors, in speaking of using the books in the classroom, that the pictures, maps and study suggestions should be considered integral parts of the text, and without their assimilation in the lesson the best learning would not be attained.

Explanation of the Profile Charts.

In order to precisely evaluate and graphically indicate

study and comparison of the texts, it was necessary to devise a scheme of numerical values. The numbers, 4, 3, 2, 1, were arbitrarily chosen to indicate, in the order of numerical value, the optimum and decreasingly favorable situation in regard to each basis of judgment, as applied to a particular text. For instance, a number 4 in causal relationships would mean excellent treatment of a subject in pointing out causes and relating geographic facts with cultural items or other geographic factors. On the other hand, a number 4 in mathematical geography would mean a minimum inclusion of mathematical facts in material required for learning. In other words, a 4 means that optimum conditions are observed in regard to a particular basis for judgment. Because the values in regard to each basis are different from those of other bases, and because these values have been subjectively worked out and applied, an explanation of the exact meaning of all values follows:

Mathematical geography.

4. Complete absence, except for appreciation purposes.
3. Very few facts required for memorization.
2. Certain facts required for each unit considered.
1. Most important part of usual treatment of a topic; mainly astronomical.

Fact emphasis.

4. Knowledge acquired through expressed relationships and natural reasoning.
3. Few facts required for memorization.
2. Very few causal relationships brought out.

1. Complete emphasis on memorization.

Causal relationships.

4. Everywhere brought out; no isolated facts.
3. Where evident and of interest, relationships brought out.
2. A few causal relationships brought out.
1. Complete lack of recognition of relationships.

Human factor influence.

4. Man never omitted as a factor in geographic considerations.
3. Recognition that geography expresses relationships between man and his environment.
2. Description of life of strange people; no relationships brought out.
1. Casual reference to humans.

Home geography.

4. The child's neighborhood and experience form the approach to all geographic principles.
3. The first region considered is the child's region, or at least his country.
2. Some adaptation made to the pupil's home land.
1. No attempt to emphasize the child's home geography, or to use it as a basis for understanding other lands.

Study suggestions.

4. Interesting, different, in compliance with progressive education; many optional opportunities.
3. Tend to lead the child out of the text to apply gained knowledge and solve problems.
2. Suggestions present but confined to a few questions and tasks limited to use of the text.
1. None present.

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Illustrations.

4. Sufficient and full of geographic qualities, either evident or indirect relationships.
3. Good geographic quality but not sufficient in number.
2. Illustrations included but not so inherently geographic.
1. No illustrations.

Maps and Diagrams.

4. Sufficient in number and specifically applied to particular facts and trends; i.e., map of the United States showing extent of corn belt and isotherms.
3. Good quality and application but not sufficient in number.
2. Some maps, a few diagrams, but not specifically adapted; e.g., a general world political map.
1. No maps or diagrams.

Discussion of Individual Texts

1814. Elijah Parish. A New System of Modern Geography.

The recommendations in the front of the book voicing the opinion of prominent men as to its value in school indicate the attitude of the time toward the nature and function of geography.

".....In particular, I was highly pleased with your repeated reference to the fulfilment of scripture prophecy in Egypt, Palestine, and other countries. I think the influence will be happy on the minds of our children and youth," writes Nicholas Pike. The people of every nation are treated religiously and morally, but nothing else of the human factor appears.

Mathematical geography and isolated facts for memorization are characteristic of the book throughout. "The morn of life (childhood) is the time to exercise and form the memory. Children need interesting facts to be suggested; let them first improve their memories with some comprehensive epitome of the science; obtain some ideas of the character and relative importance of different nations, countries, and places. After this, a minute investigation of an atlas becomes a more interesting, more intelligible, more pleasant and more instructive employment." 30

30. Postscript to Third Edition.

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In the title may be found the keynote to the author's concept of geography, "A General Description of All the Considerable Countries in the World." His actual definition in the text is "a description of the earth with its various divisions. The productions, curiosities, manners, customs, government, and religion of different nations, and even astronomy, are included in the science." 31

Parish does not introduce his subject with a fundamental chapter of principles. He includes no general view of the world. He does not recognize the relative nature of geography. He writes a geography of the world including every continent, every country, and in the case of the United States, every state.

He furnishes the location and extent, boundaries, civil divisions, religion, rivers, minerals, mountains, agriculture, manufactures, commerce, population, moral character, societies, bridges, colleges, turnpikes, towns, curiosities, and constitution of every state discussed. In connection with the towns he gives the number of churches, the kind of town hall, the theaters, with no information concerning the geographic basis for the town's existence.

The following quotation gives a typical treatment of a group of islands, the Maldives. "The inhabitants are Mahometans and pagans. The society in London for propagation of the gospel maintains a few missionaries on this coast. Both sexes

bathe every day.....The priests annually make the circuit of their island and those are punished who cannot say their creed and prayers in Arabic and construe them into their vernacular tongue..... An hundred ships of cocoa are exported in a year. Their waters abound in fish (only geographic facts)." ³²

The only tables of the text come at the end where are found such informational facts as the largest rivers and the highest mountains. The length of a degree of longitude at every latitude, and modern names of ancient places are also given. The only reference to home geography in the entire book is one of these tables showing distances of familiar places from Boston as a center.

To make light of this text because of its comparison with modern standards would be presumptuous and narrow-minded. At its time of publication it was a masterpiece, and the wealth of detail exhibits a truly amazing scholarship. The book is completely fascinating to study, and its contribution to the establishment of geography firmly in the school cannot be overestimated.

Chart I shows the profile of the Parish book. Since it was the first text studied, it is natural that it should receive low ratings; other books were judged in part on their improvement from the time of publication of the Parish text.

Parish - 1814

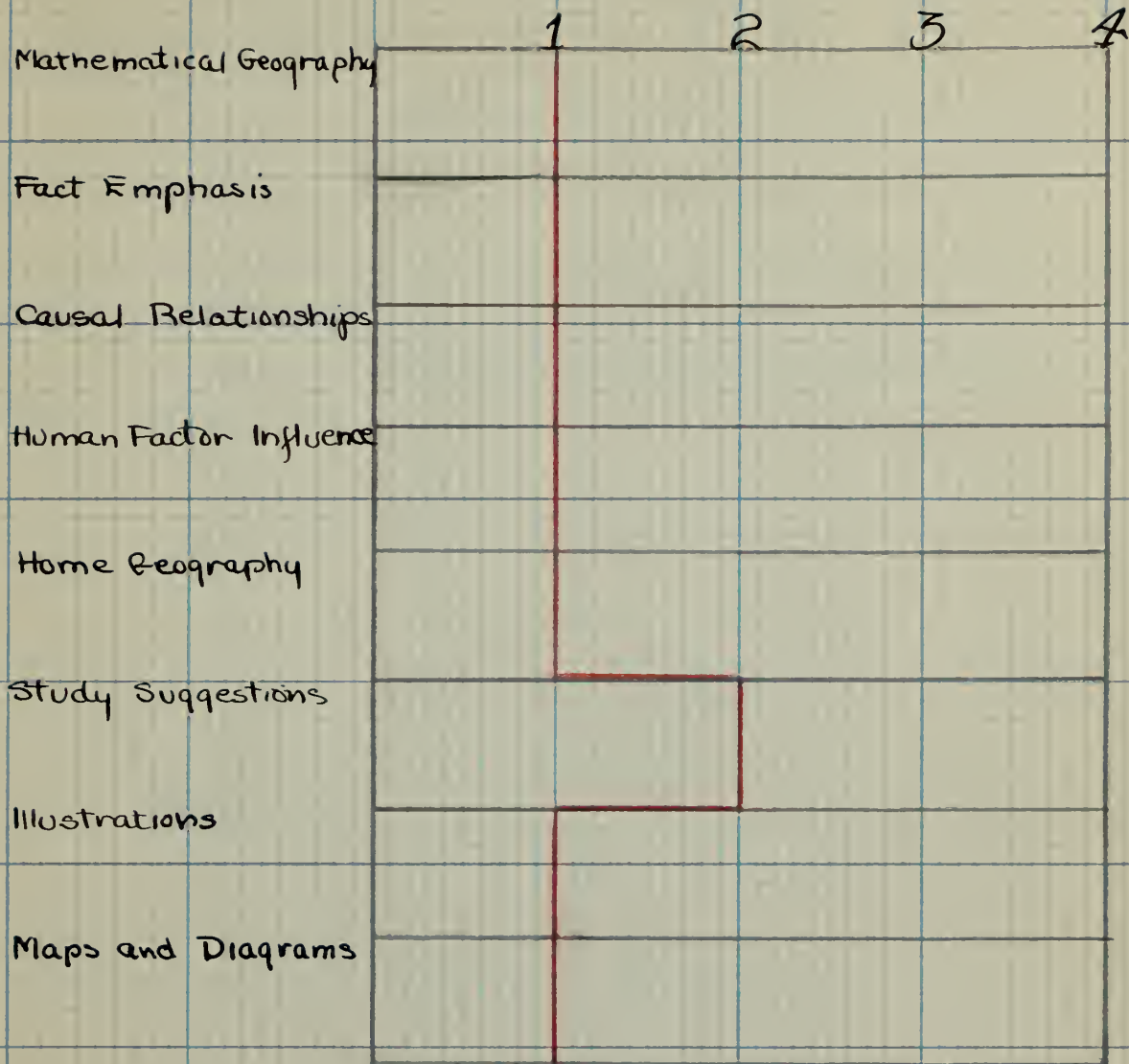
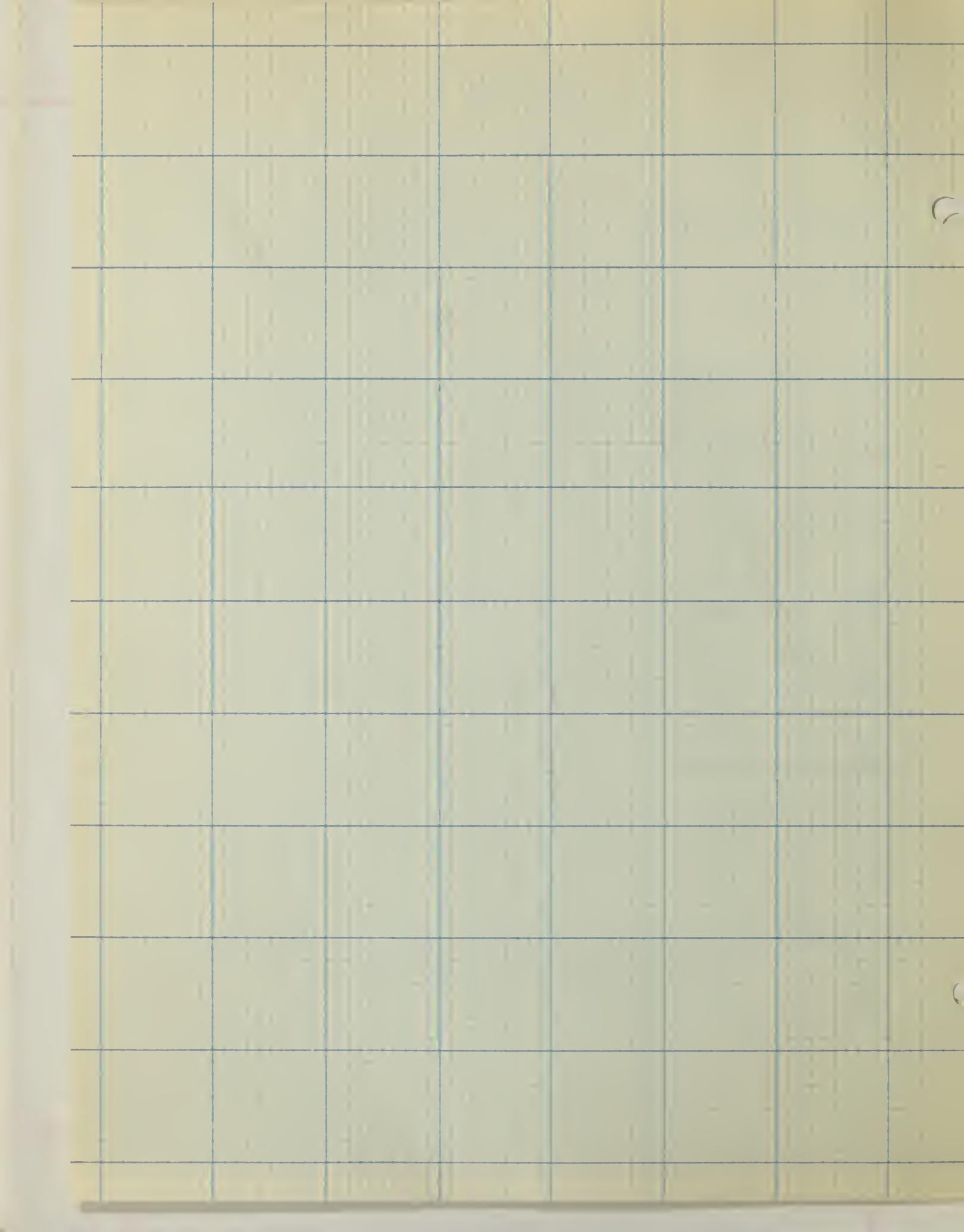


Chart 1- showing Profile of Evaluation on Basis of Judgement. For meaning of Evaluation Figures see Text pp. 30-37



1824. Jedidiah and Signey Morse.³³ A New System of Geography, Current and Modern, for the Use of Schools. Accompanied with an Atlas.

The world is presented under three distinct viewpoints: (1) an introductory view of each quarter or grand division of the globe; (2) a view of each country in detail; (3) a general view or recapitulation.

The book is largely mathematical geography with much isolated fact exposition. The author gives very logical reasons for his plan and treatment. He gives boundaries, bays, capes, and then mountains, rivers, and towns, in the presentation of each country, in order to progress from the plain to the obscure. The general view at the end is to fix all important details more firmly in the memory.

"Astronomy and geography are so intimately connected that a competent knowledge of geography is unattainable without some previous acquaintance with astronomy." Thus Morse justifies, in his introduction, the opening of his book with a chapter on astronomy.

The book includes at the end a section of Ancient Geography consisting mostly of modern names for geographic places known to the Roman and Greek civilizations.

There are no causal relationships expressed. The general

33. Sidney Morse was the almost equally famous son of Jedidiah. Their collaboration was limited since Sidney first published in 1820, and Jedidiah died in 1826. The volume discussed represents for the most part the work and philosophy of the father.

Morse - 1824

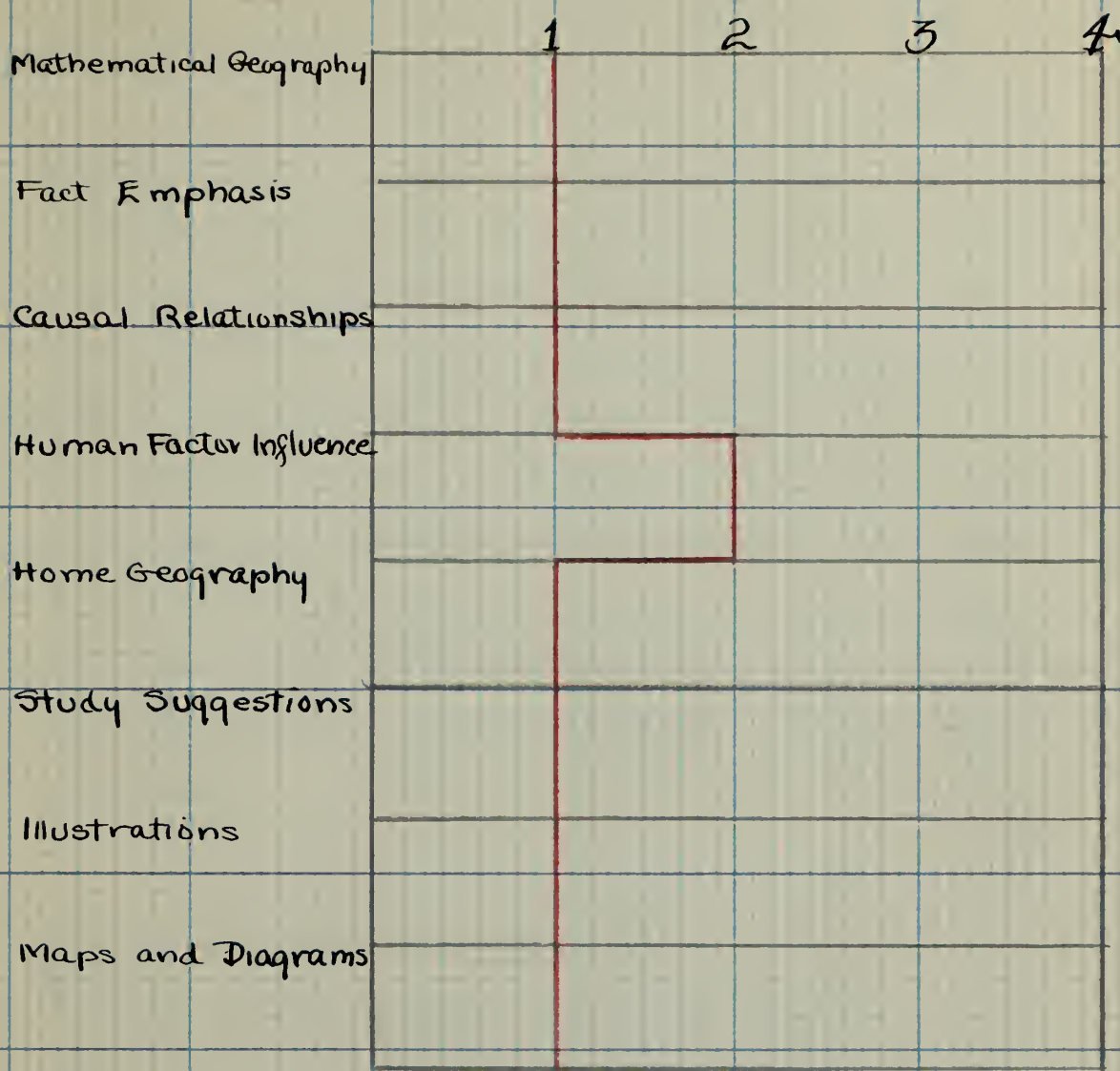
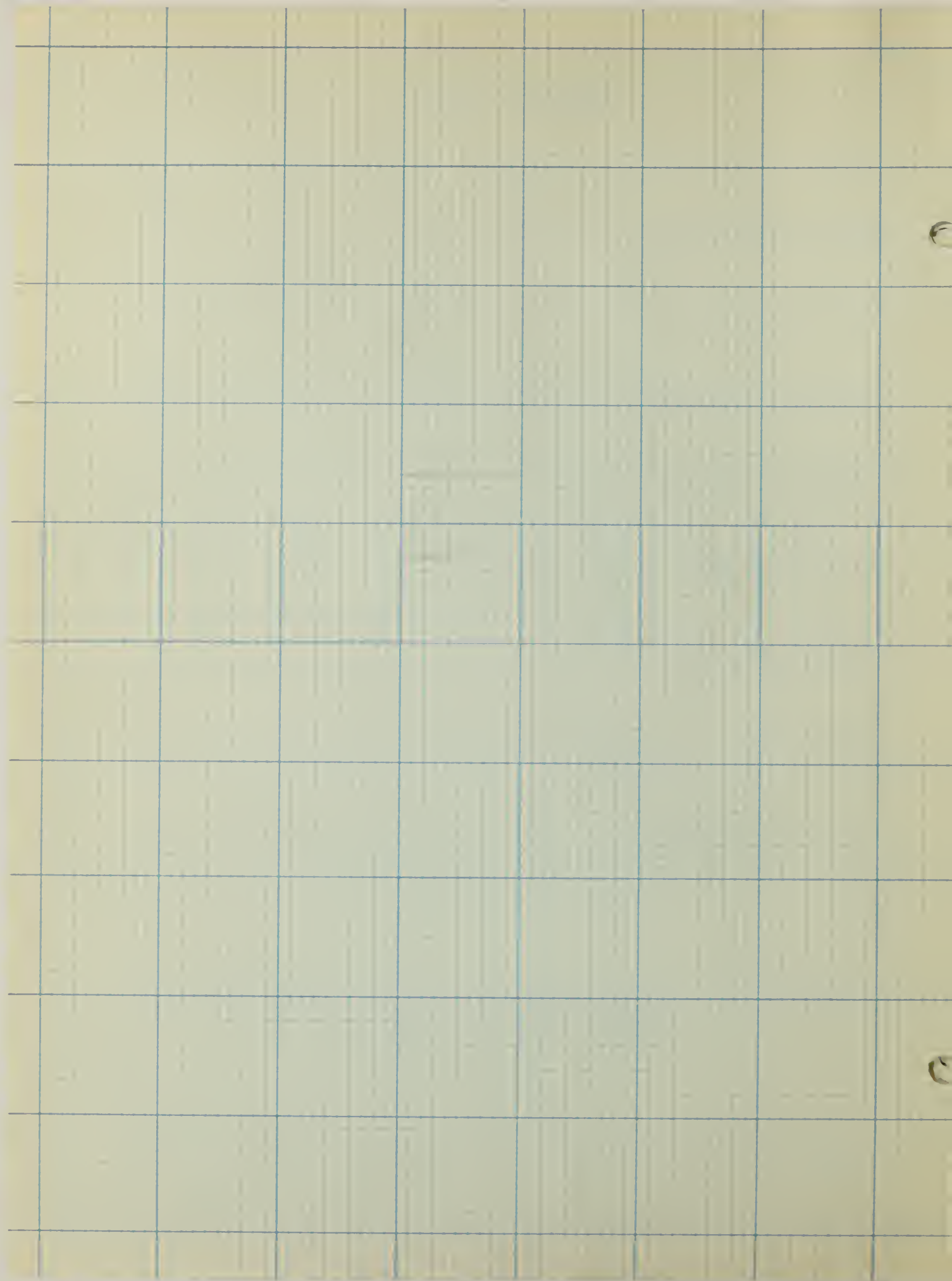


Chart 2 Showing Profile of Evaluation on Basis of Judgement. For meaning of Evaluation Figures see Text p. 30



view section contains material made up for the most part from tables of exports, imports, locations, distances, etc. Study suggestions are questions at the ends of the chapters.

Morse hints of a comprehension of the human factor in his presentation of customs of strange peoples. He makes no attempt to show the relationships between their way of life and their environments. His book is scientific and extremely detailed, and was one of several of his texts to be used as authoritative for over a century.

Chart 2 reveals lowest rating for Morse, as in Parish, in all but one particular. In the case of recognition of the human factor his detailed description of life and customs among strange people receives a rating of 2, since he makes no connection between cultural patterns and geographic environment.

1827. J. E. Worcester. Elements of Geography, Ancient and Modern.

Worcester is credited with being one of the first to use in publication the journey geography method which is still used in the classroom today to bring reality to the child's imagination.

His treatment per unit is somewhat similar to that of Parish. His comparative geography section consists mainly of statistics and tables which can be used for comparative purposes. His Ancient Geography is similar to Morse's, but he also delves into much ancient history.

But in this book the first improvements which start the trend toward the present-day texts are found. There is no laborious bounding of states or countries. "They (boundaries) can be most easily learned and best fixed in memory by the use of maps." ³⁴ The first uses of diagrams appear. They are very clear, well adapted, and they answer a definite need.

Illustrations are for the first time evident. They are not inherently geographical and no sub-title explains their connection with the text. They illustrate famous places and strange customs rather than geographic principles and relationships.

But Worcester must be considered among those early authors who stressed factual memorization and who failed to draw causal relationships. He says, "Let the pupil learn the boundaries of a country, the situation of the oceans and seas, the largest rivers, the principal ranges of mountains, and the most important cities." ³⁵

Chart 3 shows the emphasis in Worcester upon fact learning and the lack of causal relationships and home geography. It indicates the wide improvements found in other respects, especially in the matter of maps, which are far beyond those of contemporaneous and even of some later texts.

34. Introduction.

35. Introduction.

Worcester -1827

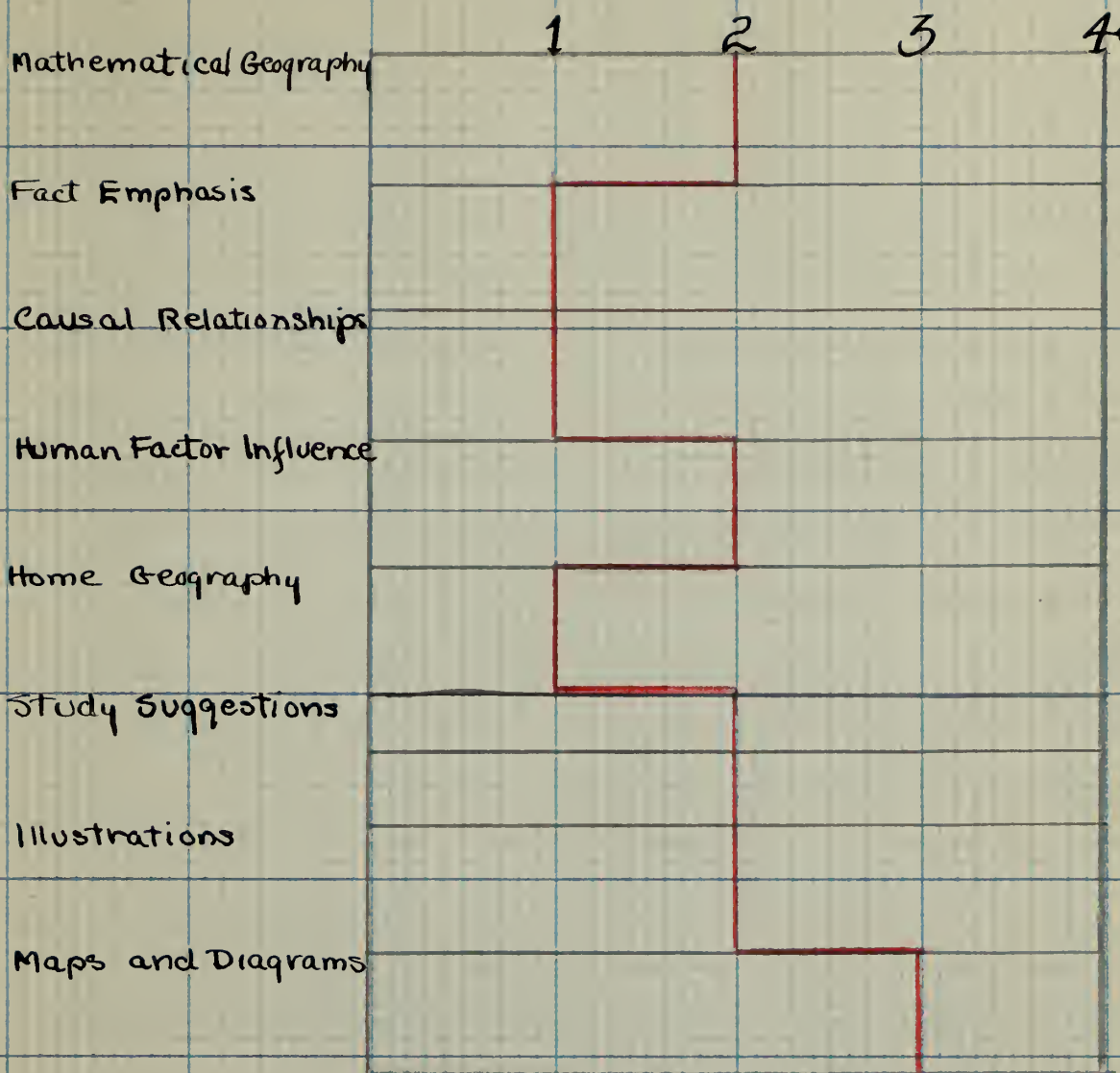
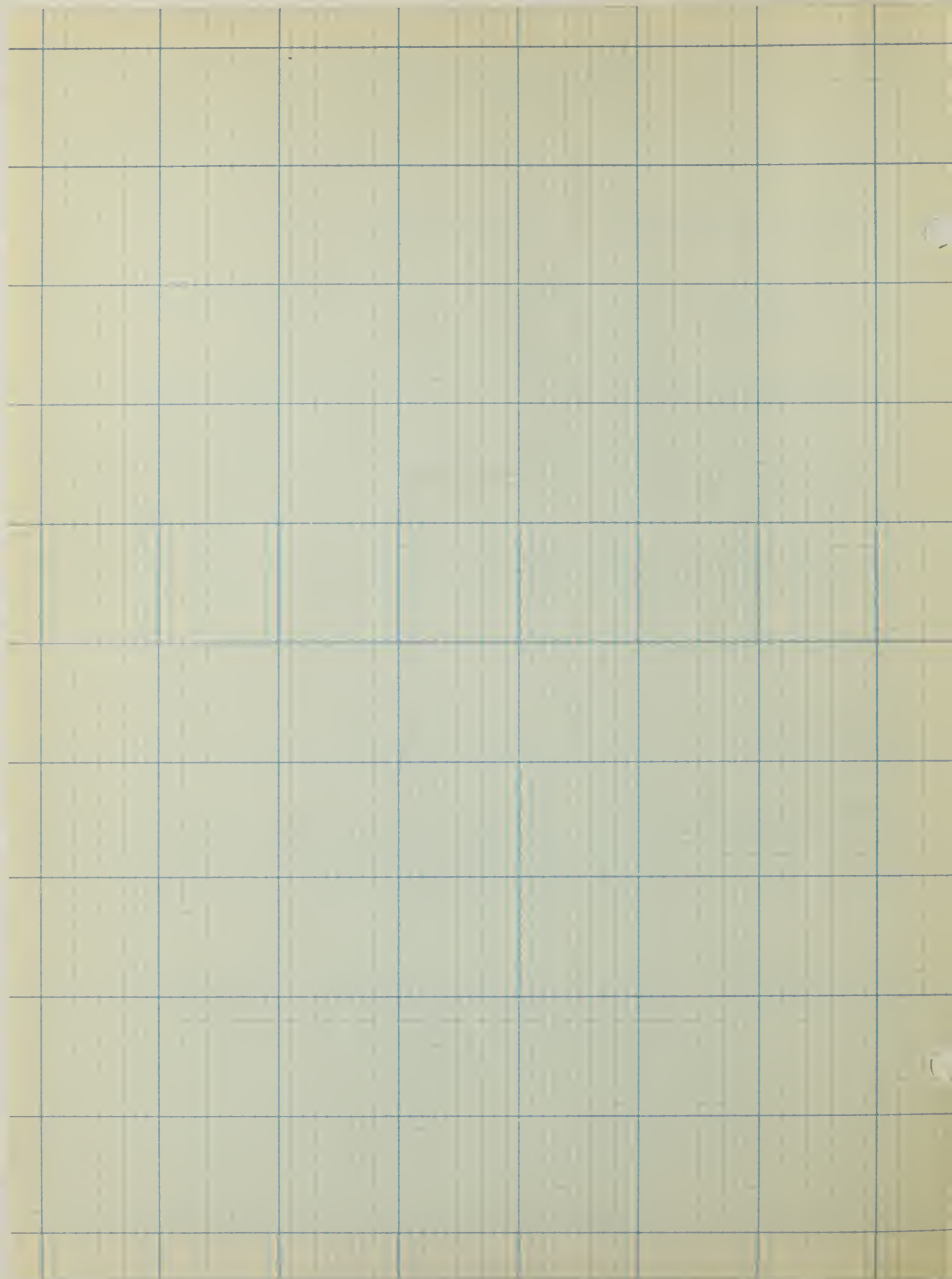


Chart 3

showing Profile of Evaluation on Basis
of Judgement. For meaning of Evaluation
Figures see Text p 30



1855. R. G. Parker. Questions in Geography Adapted for the Use of Morse's, Woodbridge's, Worcester's, or Any Other Respectable Collection of Maps. To Which is Added a Concise Description of the Terrestrial Globe.

Parker has sensed the existence of futility of strict memory geography. He says, in his introduction, "Many excellent treatises on the subject have been published, to which it may be objected that the overburdened memory is unable to recall, in time of need, that which ought to be as familiar as household words." However, he does not seem to have sensed that the answer lies in the development of an understanding of causal relationships. His solution is to prepare the material for memorization with special reference to the wants of school children. His questions are all locational and factual, with no reasoning involved. All answers are from memory.

Chart 4 shows Parker's effort to omit some useless mathematical geography. It shows that he included no study suggestions, no illustrations, no maps and diagrams. It brings out the type of text which Parker wrote, compiled for the most part of questions for answering by isolated memorized facts.

18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98 100

102 104 106 108 110 112 114 116 118 120 122 124 126 128 130 132 134 136 138 140 142 144 146 148 150 152 154 156 158 160 162 164 166 168 170 172 174 176 178 180 182 184 186 188 190 192 194 196 198 200

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702 704 706 708 710 712 714 716 718 720 722 724 726 728 730 732 734 736 738 740 742 744 746 748 750 752 754 756 758 760 762 764 766 768 770 772 774 776 778 780 782 784 786 788 790 792 794 796 798 800

802 804 806 808 810 812 814 816 818 820 822 824 826 828 830 832 834 836 838 840 842 844 846 848 850 852 854 856 858 860 862 864 866 868 870 872 874 876 878 880 882 884 886 888 890 892 894 896 898 900

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Parker - 1855

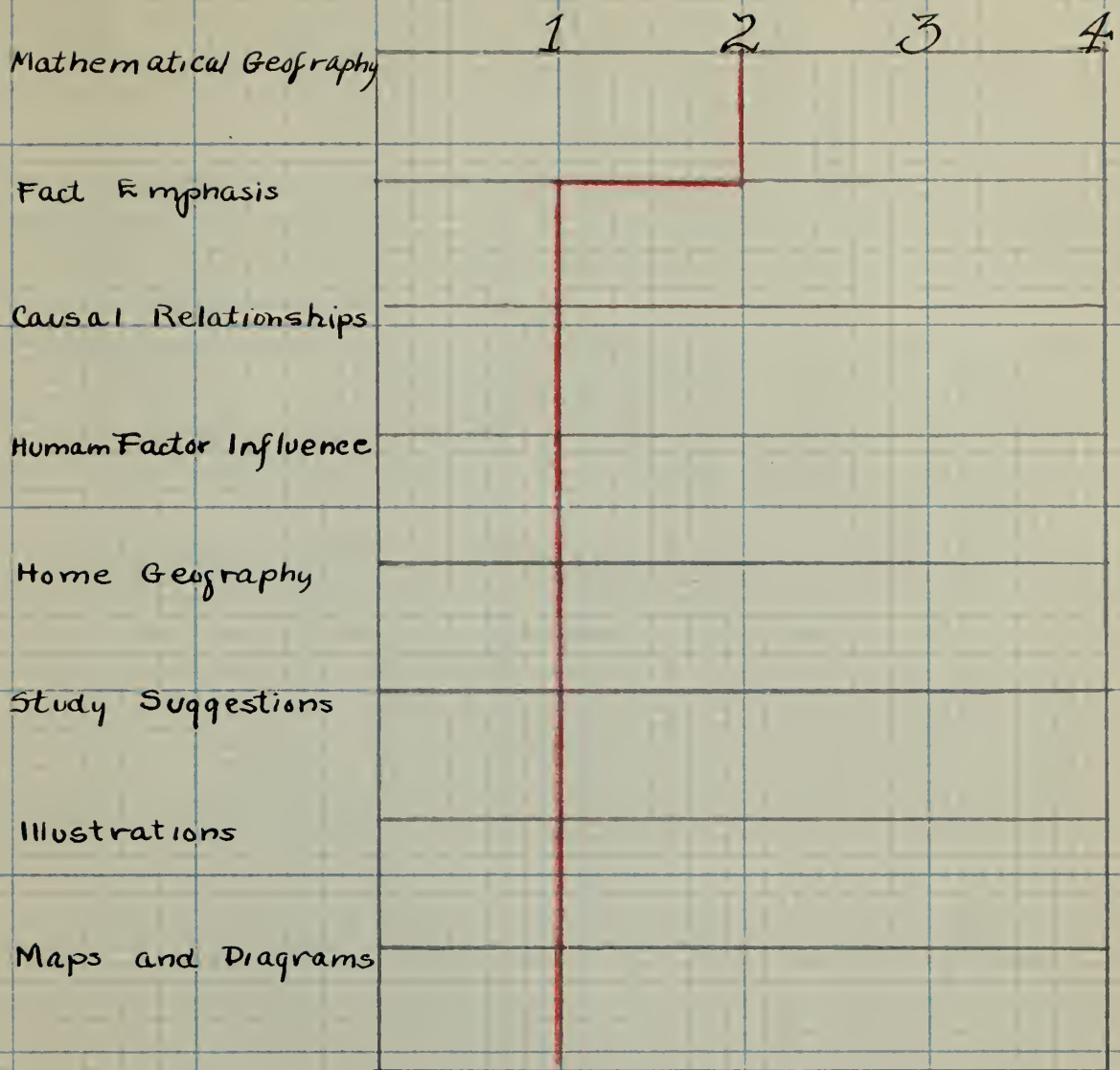


Chart 4 showing Profile of Evaluation on Basis of Judgement. For meaning of Evaluation Figures see Text p.30

1880. William Swinton. Grammar School Geography, Physical, Political, and Commercial.

Swinton published his book during the time of ascendancy of physical geography over political. His book exemplifies both types in its emphasis, being written to "strike a balance between the two." ³⁶

The primary characteristic is factual material for memorization, with no relationships brought out or causes explained. "Paragraphs are cast in a form convenient for memorizing and recitation." ³⁷ The introduction is concerned chiefly with mathematical geography.

The illustrations in the book are plentiful and of very good geographic quality for the period of publication. The human factor is omitted entirely, without even the usual discussion of customs and religion.

Swinton's study suggestions are good, in that they recognize to some extent individual differences and lead the child out of the text to his own experience. Swinton has a system of supplementary notes of a more detailed character which he recommends for the use only of those who are particularly interested or who desire detailed information.

An attempt to teach home geography is expressed in Swinton's adaptation of his book to specific regions by having a special supplement dealing primarily with these areas. He

36. Preface

37. Preface

Swinton - 1880

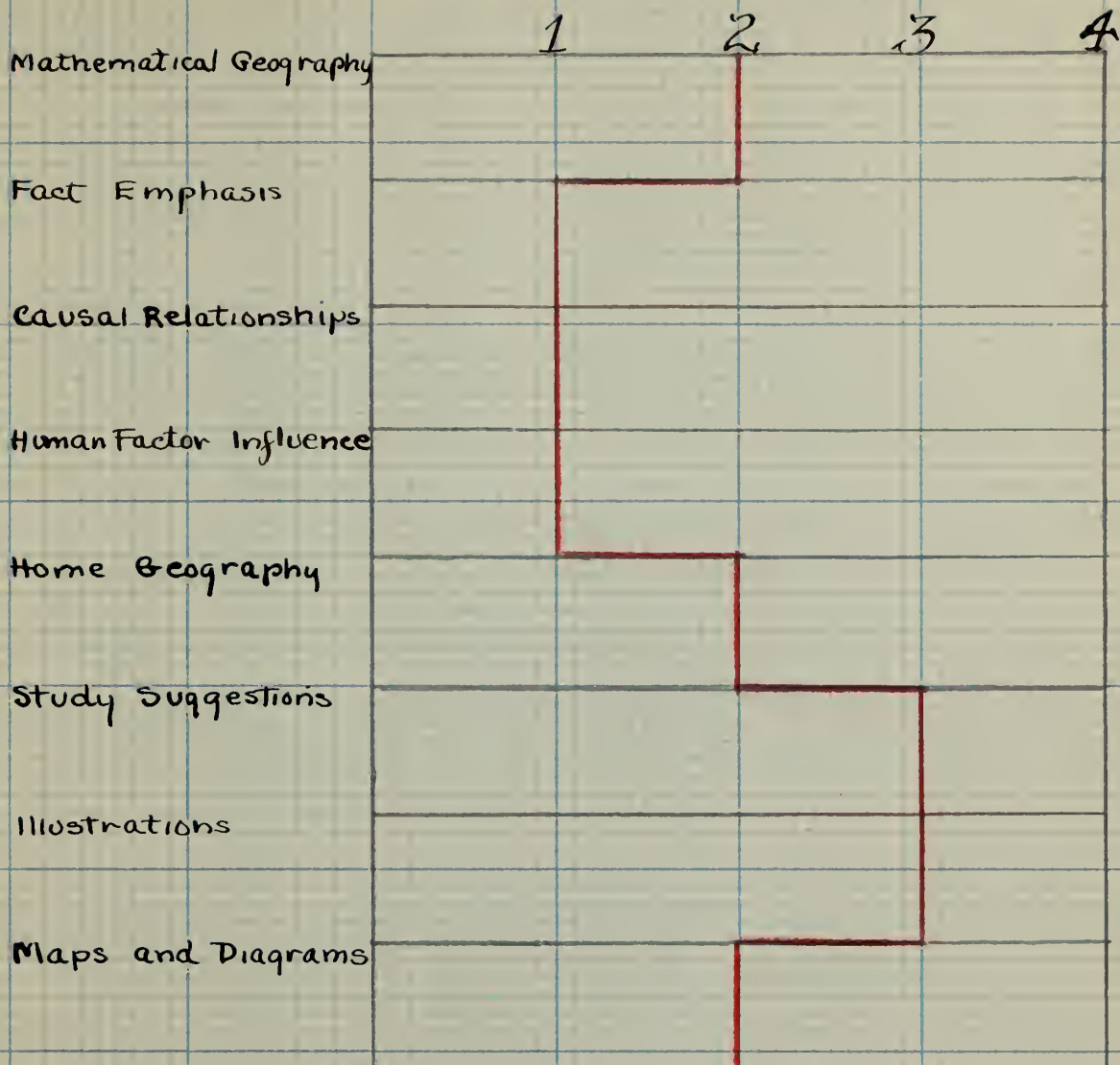
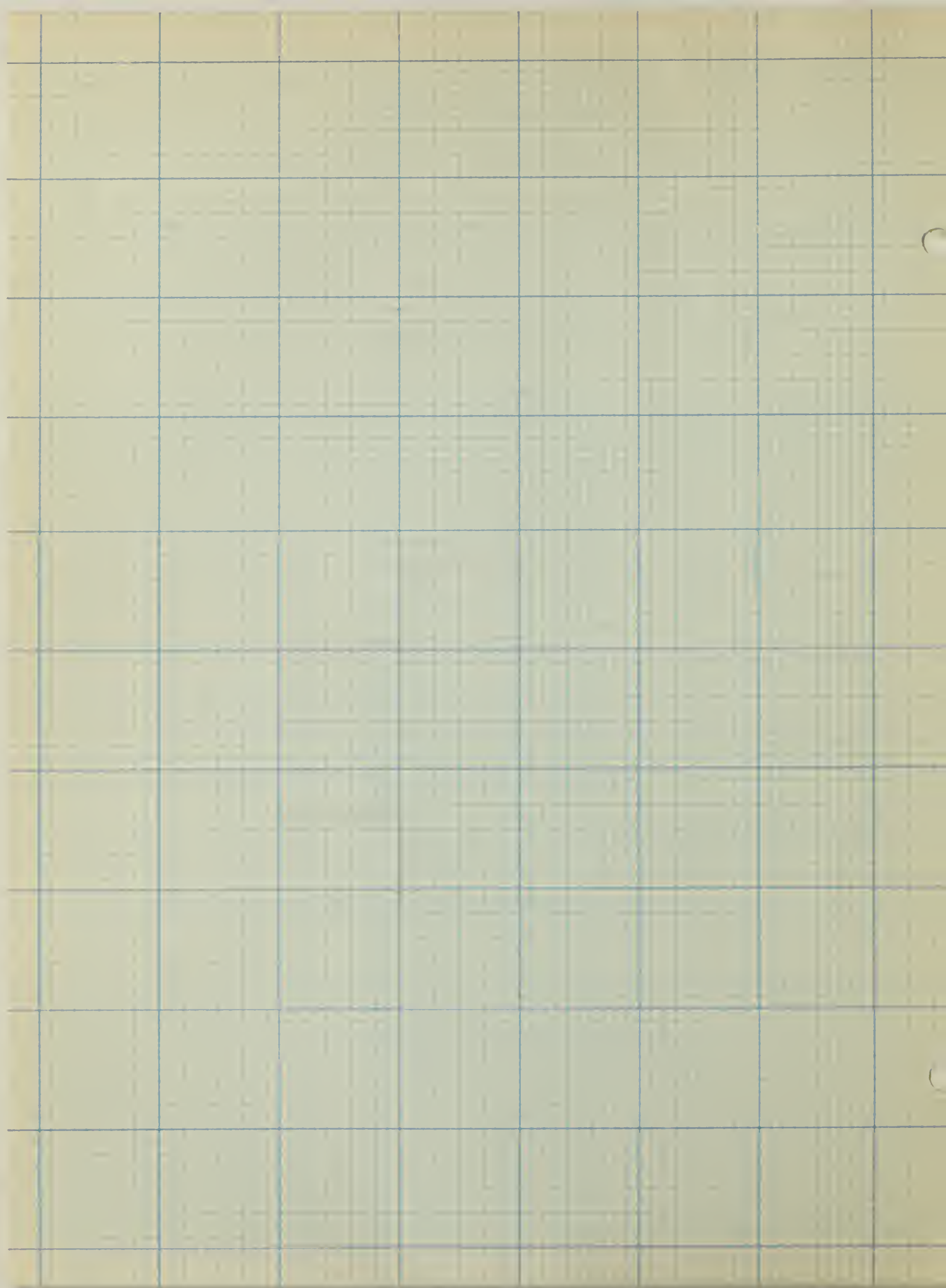


Chart 5

Showing Profile of Evaluation on Basis of Judgement. For meaning of Evaluation Figures see Text p. 30.



has a New England Edition for students in that area, with a 32-page supplement devoted to detailed discussion of the region.

Chart 5 shows factual emphasis, lack of causal relationships, and omission of the human factor still characteristic in 1880. Swinton's study suggestions allow for choice and individual differences. His illustrations are shown to be of superior geography quality.

1890. Arnold Guyot. The Earth and Man.

This book is compiled from a series of lectures on "Comparative Physical Geography and Its Relationship to the History of Mankind". Guyot adhered to two modern principles which are found for the first time in the series of texts studied. He believed that geography was more than description. "Geography should not only describe, but interpret, tell the how and why of phenomena described." In other words, description without causal relationship is not geography.

He also believed, as is evident from the title of his book and the subject of the derivative lectures, in the human factor as an essential in any and all geographic discussion. His book contains much factual material due to his compliance with Pestalozzian principles of first taking a general outside view, then studying the particular parts, and finally, through analysis, formulating laws and principles. He devotes one chapter to the first task, eight chapters to the second task,

I have been thinking of you very much lately and wondering how you are getting on. I hope you are well and happy.

I have been thinking of you very much lately and wondering how you are getting on. I hope you are well and happy.

I have been thinking of you very much lately and wondering how you are getting on. I hope you are well and happy.

Guyot - 1890

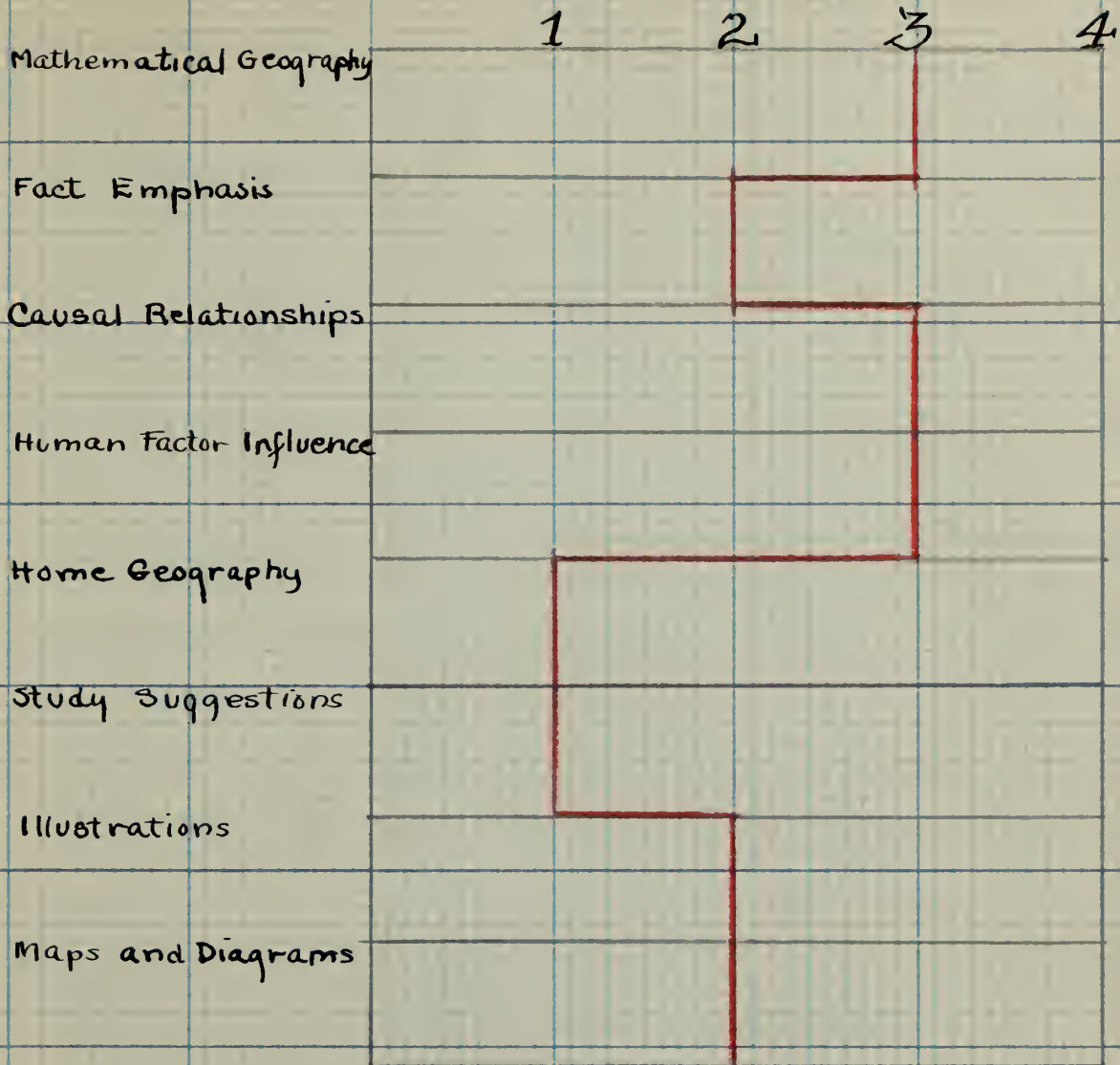
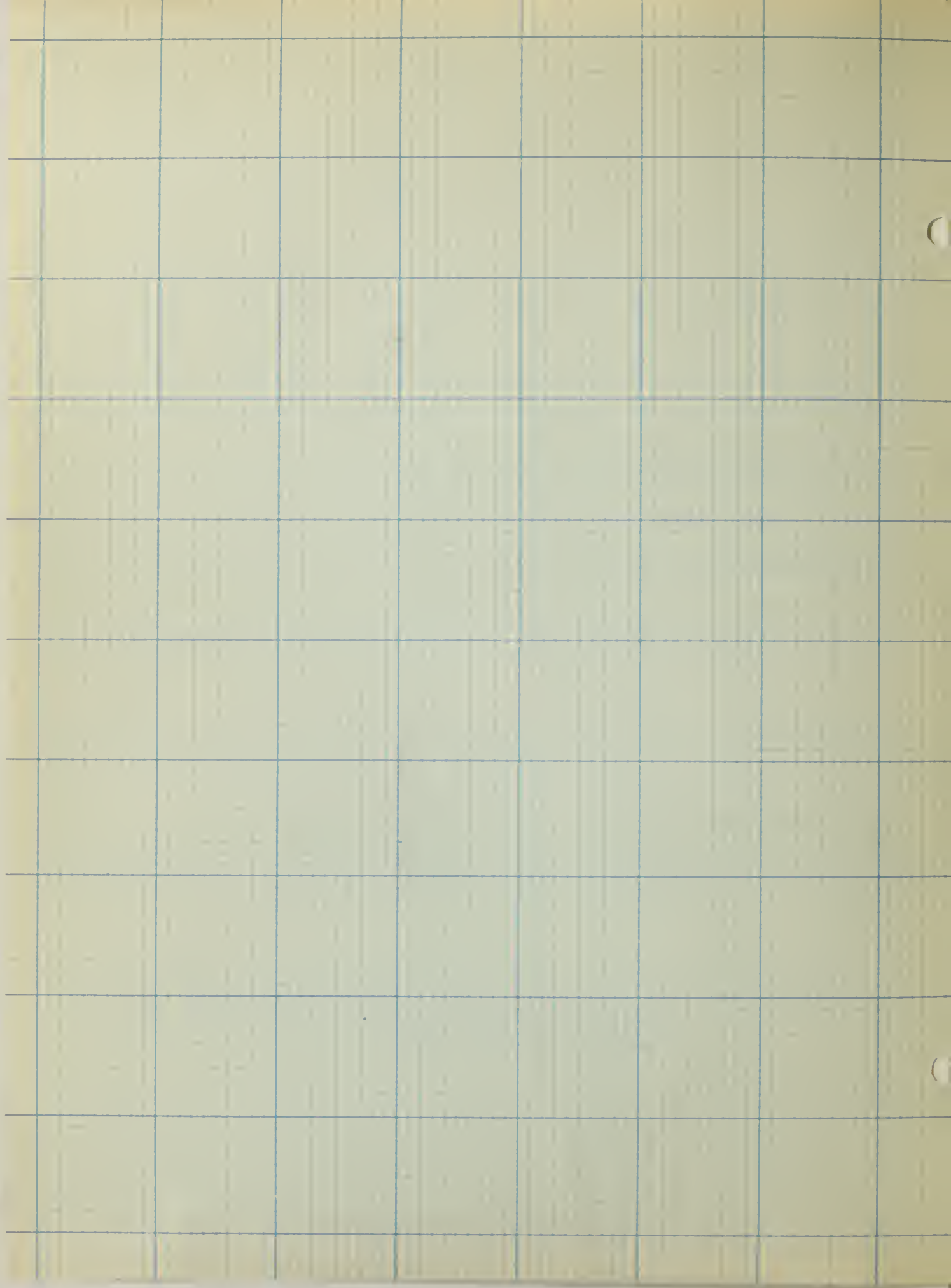


Chart 6 showing Profile of Evaluation on Basis of Judgement. For Meaning of Evaluation Figures see Text p. 30



and three chapters to the third task. The first nine chapters are mainly mathematical and factual geography. The last three apply the principles to man and discuss man and his environment.

Guyot's principles are best expressed in his own statement of objectives:³⁸

1. The forms, arrangement, and distribution of terrestrial masses on the surface of the globe, accidental in appearance, do reveal a plan which we are enabled to understand by the evolutions of history.
2. The continents are made for human societies.
3. Each of the northern or historical continents is specifically adapted to perform a special part corresponding to the wants of humanity in one of the great phases of its history.

Chart 6 shows Guyot's strides in omission of mathematical geography and decrease in fact emphasis. For the first time a rating of 3 is given in causal relationships and the human factor, the only other value received by previous texts being 1.

1894. Abxander E. Frye. Primary Geography.

Frye provides for home geography with a special edition for particular regions. Only in the special supplement is the material strictly localized. The book gives a general view of the resources and industries of the world. Further emphasis on home geography is given in the introductory chapter, in which physical elements are discussed. Only those

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which the child can see from his own school or in his own home, rain, soil, slopes, hills, valleys, etc., are introduced. The map study starts with the school room and proceeds thence to the city, state, country, and continent.

The aim of the book is to use language suited to pupils of primary grades. It is accompanied by a manual of methods.

The plan of the book is first, coverage of the earth by map study to teach the physical elements, then coverage of the earth as to climate, plants, animals, and finally coverage as to products. Illustrations are abundant and full of geographic quality, clearly exemplifying the text. The maps, for the first time, indicate relief as well as outline of shape.

Frye's book was responsible for great strides in the method of geography teaching. Factual material, however, is still most important, and human relationships are overlooked.

Chart 7 shows that Frye is the first text to receive ratings of 4, which are in home geography and illustrations. The profile in general shows Frye's superiority in pedagogical advances, but a slight retrogression in comparison with Guyot, in selection of material.

Frye - 1894

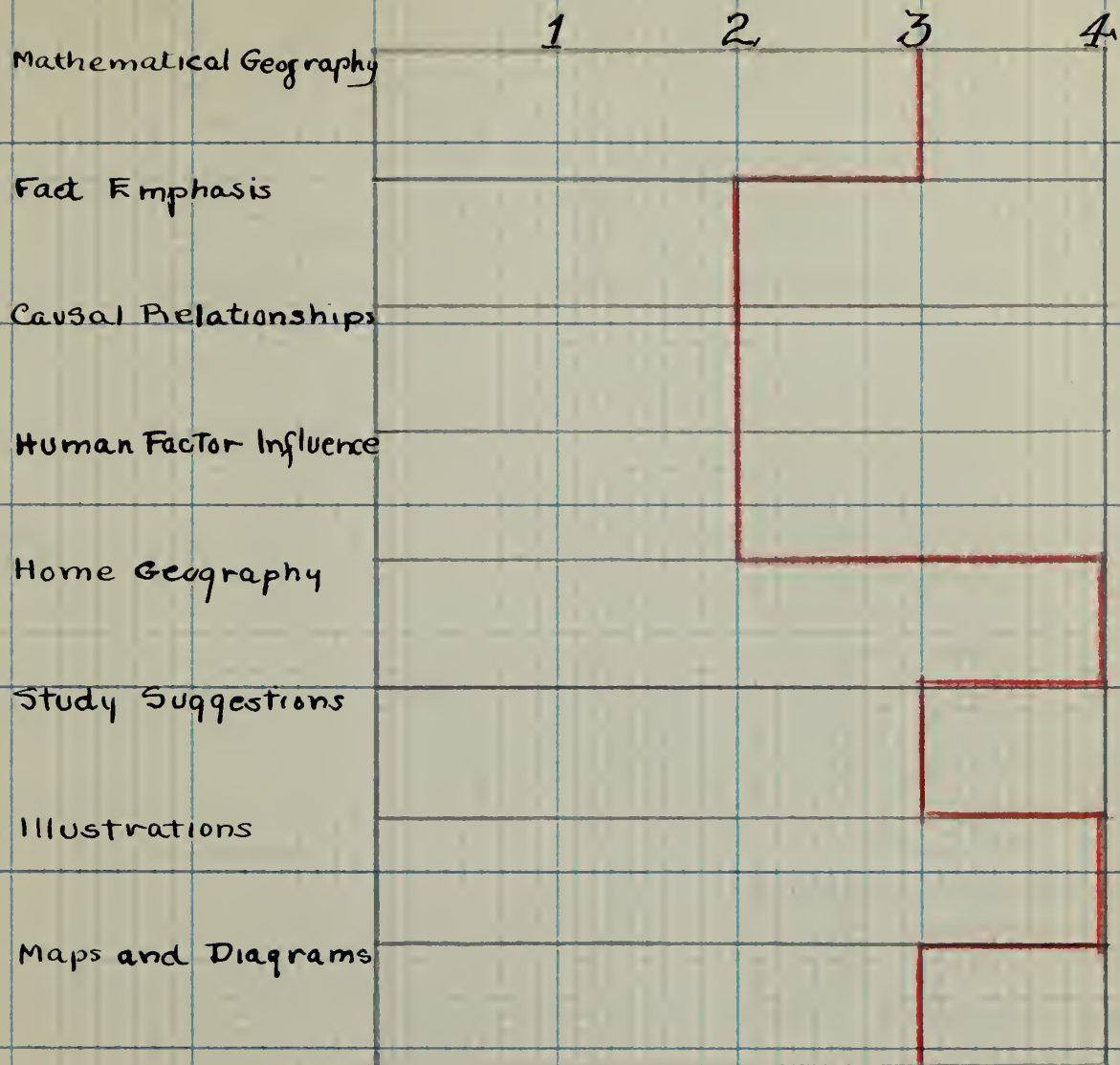
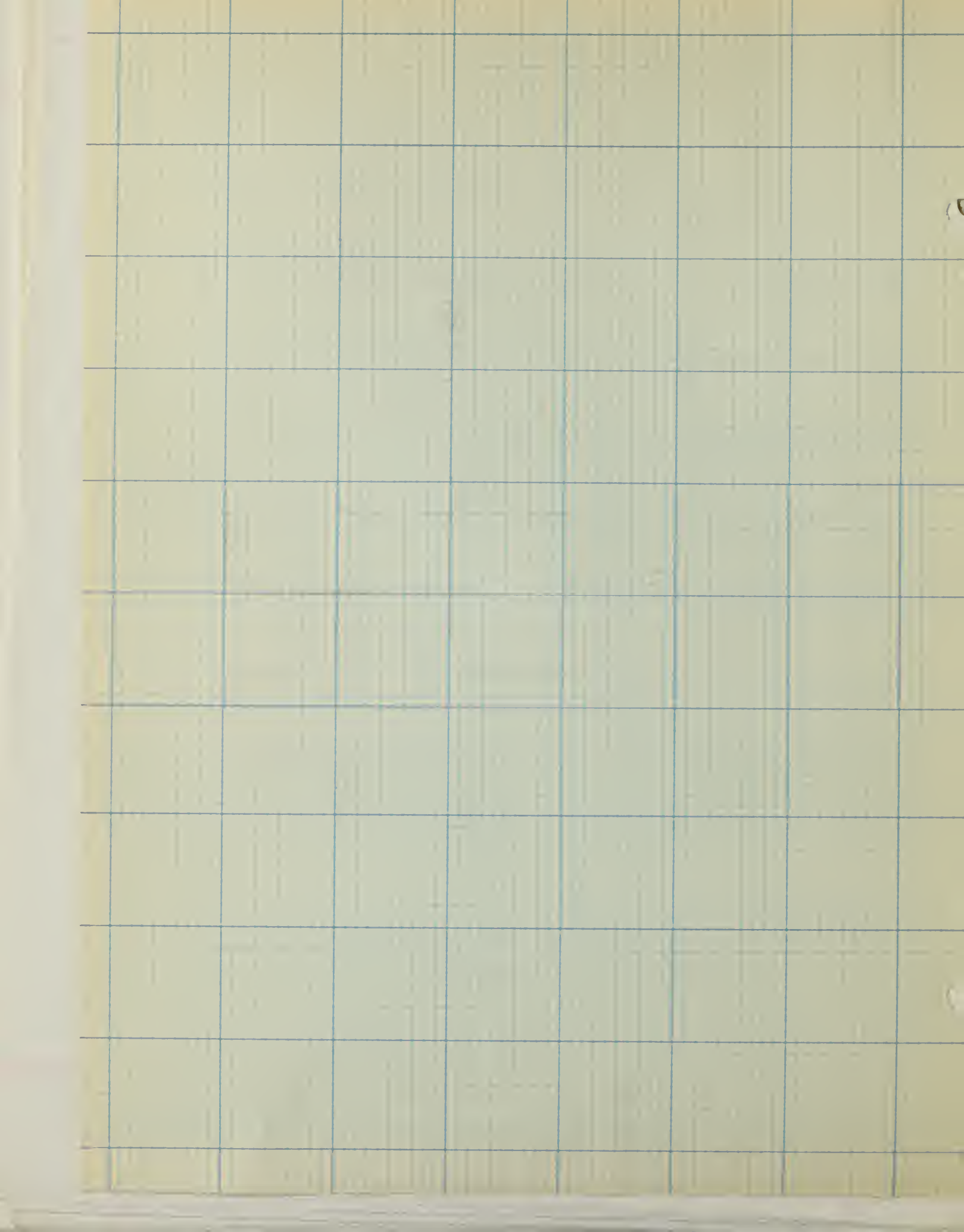


Chart 7 showing Profile of Evaluation on Basis of Judgement. For meaning of Evaluation Figures see Text p. 30



1905. Ralph S. Tarr, and Frank M. McMurray. A Complete Geography.

Once again, in this book, as in Guyot, human geography is found throughout. The life of people, the reason for their being in particular regions, the reason for their particular way of life in that region, all are completely discussed, and not supposedly covered by lists of products and exports.

Here, too, home geography is the guiding principle. There is only one chapter of general principles, then the author treats first New England, then the United States, going to Europe for treatment designed for comparison with the United States, thus naturally bringing the child home again.

The illustrations are very apt and highly geographic. Their value is increased by the excellent explanations in their captions.

Chart 8 shows the high rating of the Tarr and McMurray text in almost every particular. The ratings for their text could be applied to many texts published in the last decade.

1919. F. D. Herbertson. Europe and Great Britain (The Clarendon Geography).

Herbertson first utilizes the concept of natural regions in his subject treatments. He refuses to be blocked by political divisions.

His progression from general principles to the British

Tarr and McMuray-1905

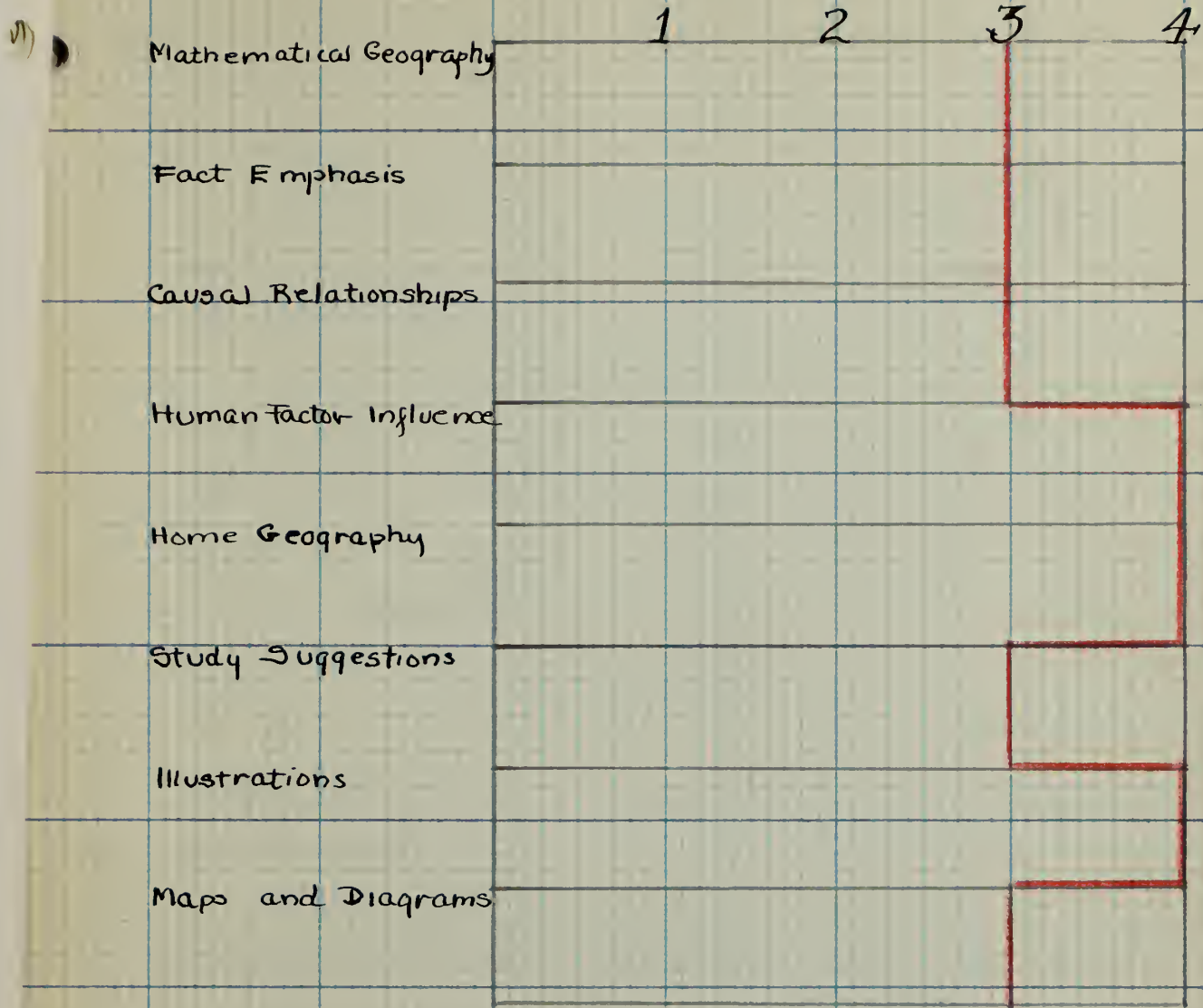
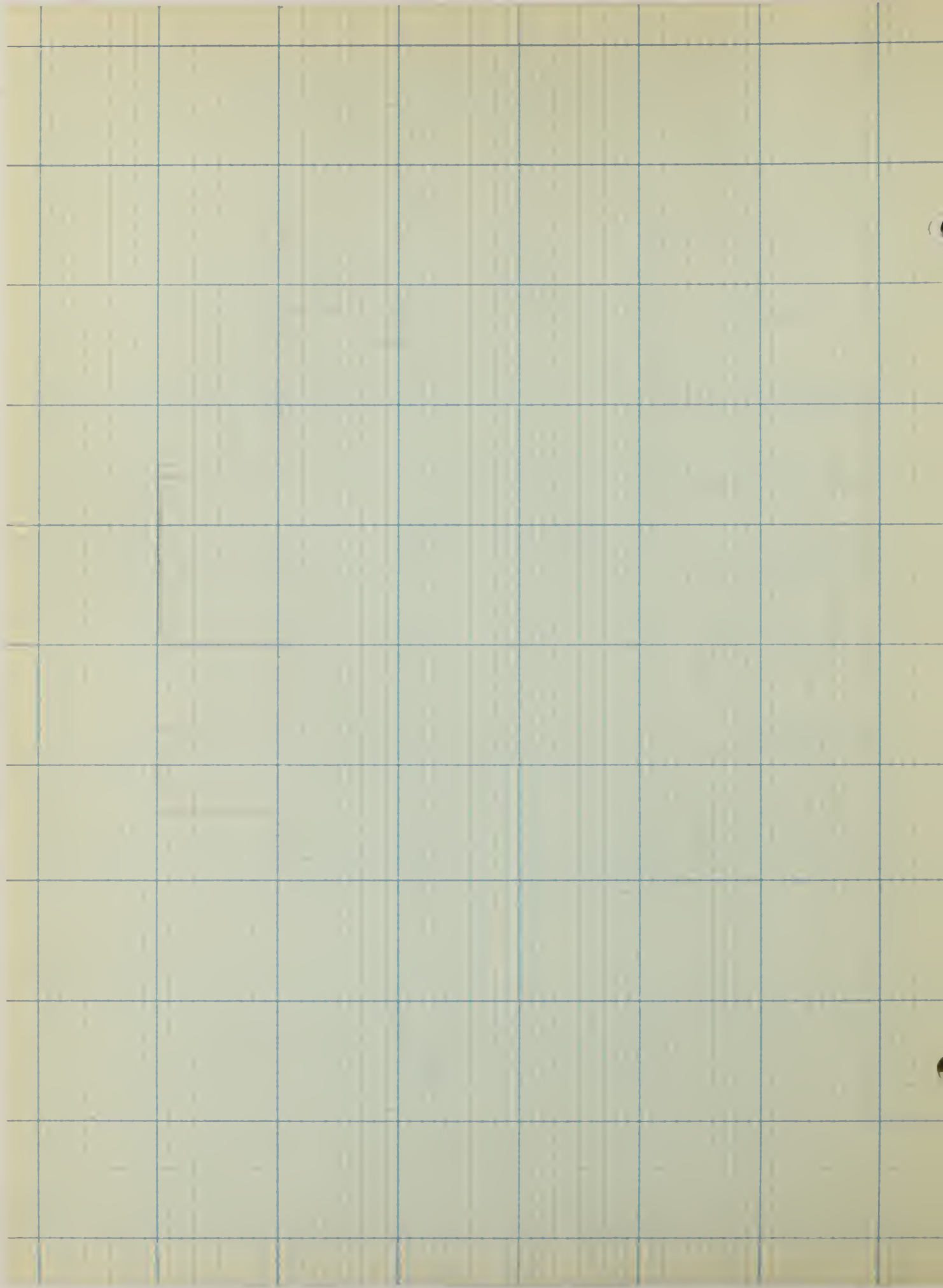


Chart 8

Showing Profile of Evaluation on Basis of
Judgement. For Meaning of Evaluation
Figures see Text p.30



Isles and Europe indicates his belief in the value of home geography. All his study guides in the general section relate principles to the child's home. Causal relationships are everywhere brought out. Recognition of the human factor is evident but is not the dominant theme.

There is not much emphasis on factual geography. All study questions serve to make the child organize his material and reason the answer.

Chart 9 shows that Herbertson's, as well as the Tarr and McMurray text, was a very superior book for the time of publication, as far as the bases selected for judgment are an indication. These two texts, published fifteen years apart, show that over this period at least, the bases used in study were definitely established trends.

1924. Harlan H. Barrows, and Edith P. Parker. Journeys in Distant Lands.

Barrows and Parker believe that to introduce a child to geography with a region which is not new to him is not advisable, since there is less opportunity for stimulating his curiosity and developing a real interest. They also believe that life in the United States is too complex to start with, if one believes in the principles of causal relationships and the human factor. They claim that the causal relationships to be drawn from the adjustment of the Eskimo to his environment are simple enough to instill an understanding of these principles without any cause for memorization.

Herbertson - 1919

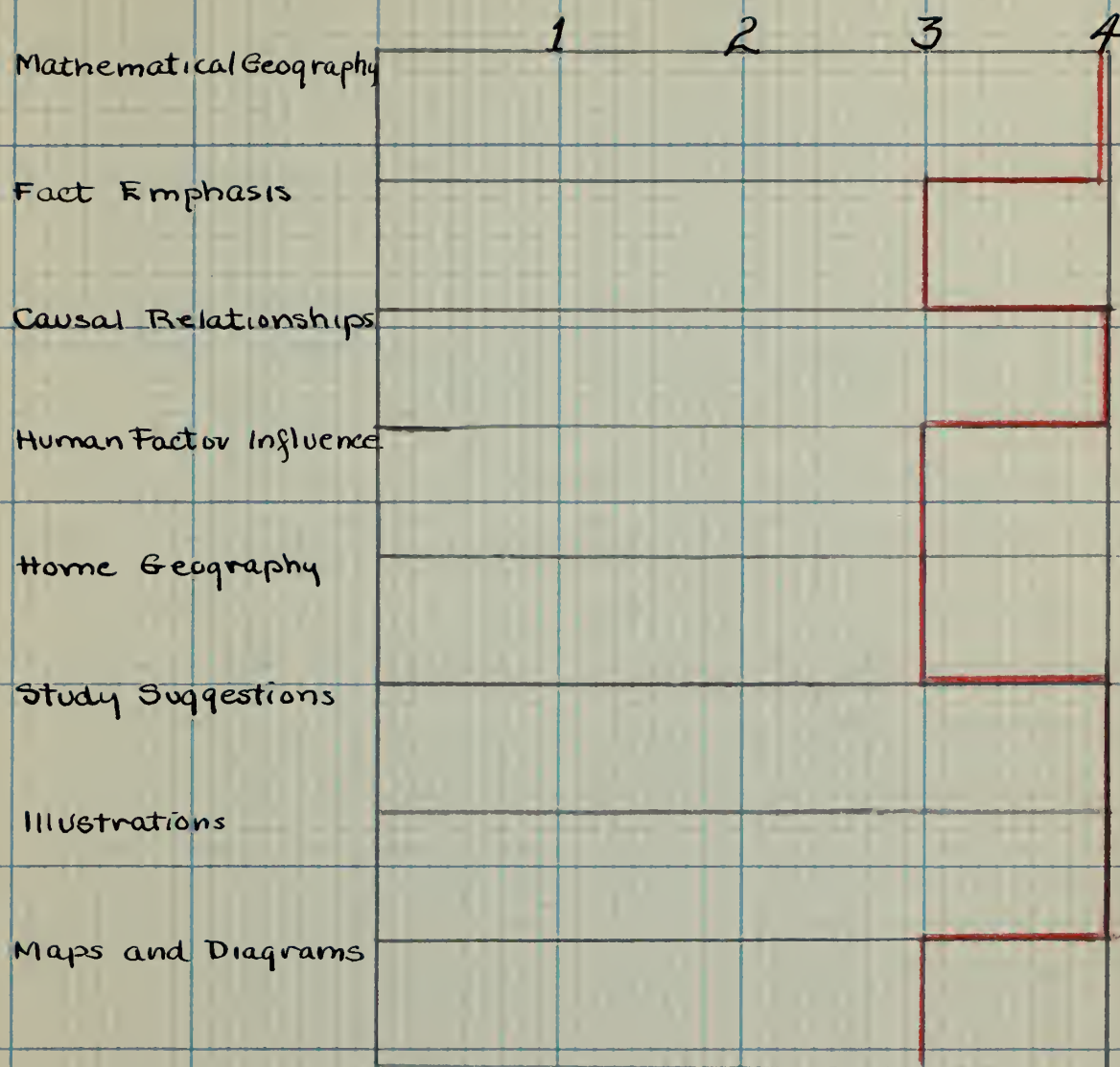
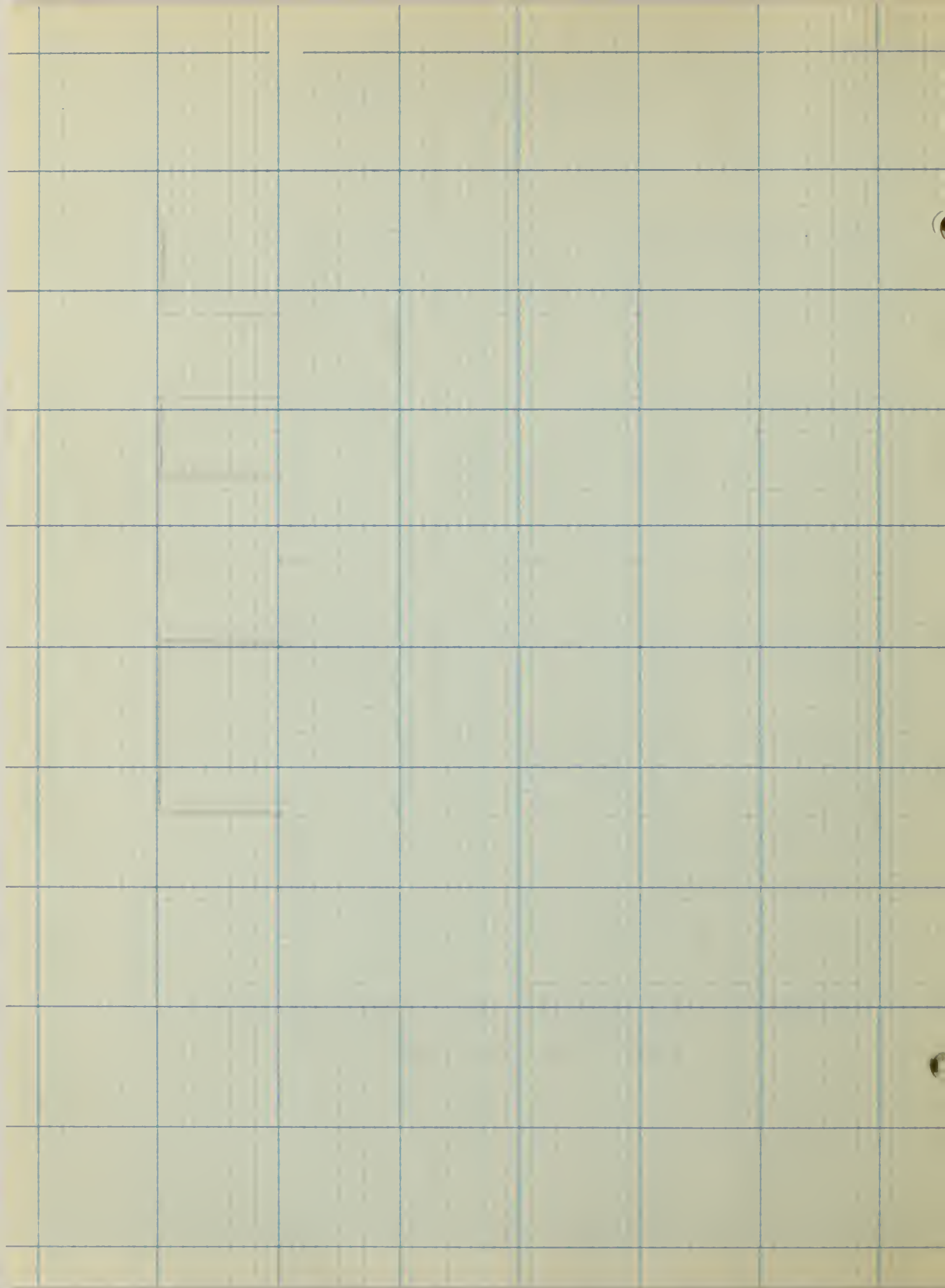


Chart 9 - Showing Profile of Evaluation on Basis of Judgement. For meaning of Evaluation Figures see Text p. 30



So, in the first book of their series, they do not start with the United States but with journeys to far-away lands. Each unit is discussed as a visit to a typical family in a strange land. Causal relationships are stressed. There is no mathematical or purely factual material except in what is presented for appreciation purposes. Geography as the science of human relationships with the environment is the keynote.

Maps are unique in that only a specific section is shown, and that is superimposed on a blank globe to show the relative location. No names are placed on the map excepting the one or two which explain the particular point. Illustrations are excellent and their study is meant to be included as an integral part of the text. There is some question whether the maps described fail to give a unity of concept concerning the globe as a whole because of the emphasis on small pieces. The effect could be remedied by the inclusion of a map and discussion of all the pieces fitted into place.

The tone of the text is very friendly and intimate, appealing to children. Study suggestions are called games and puzzles.

Chart 10 shows a rating of 4 in all factors of judgment for the Barrows and Parker text, excepting that of home geography, in which they follow a theory almost entirely the reverse of that of Tarr and McMurray.

Barrows and Parker - 1924

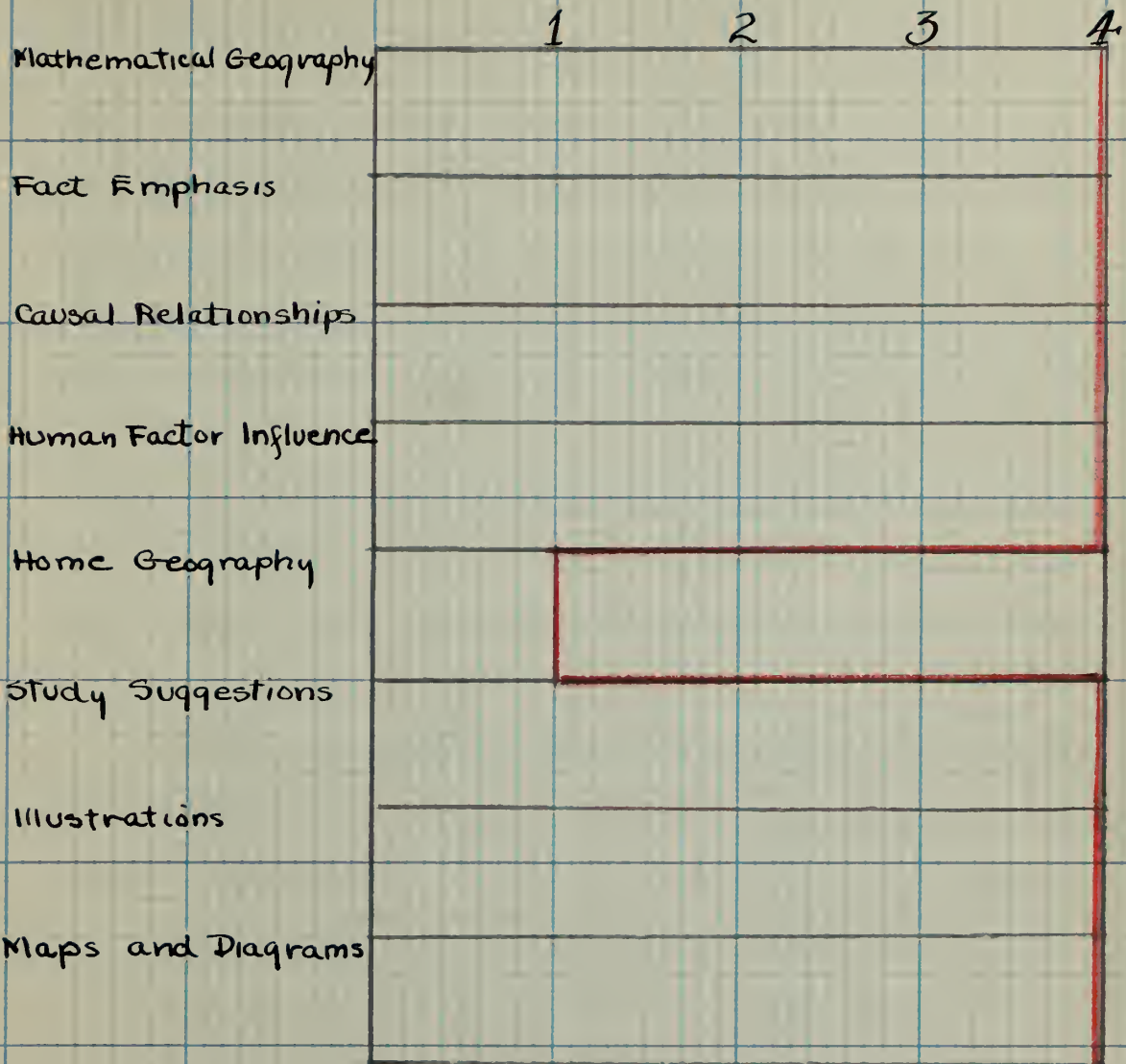
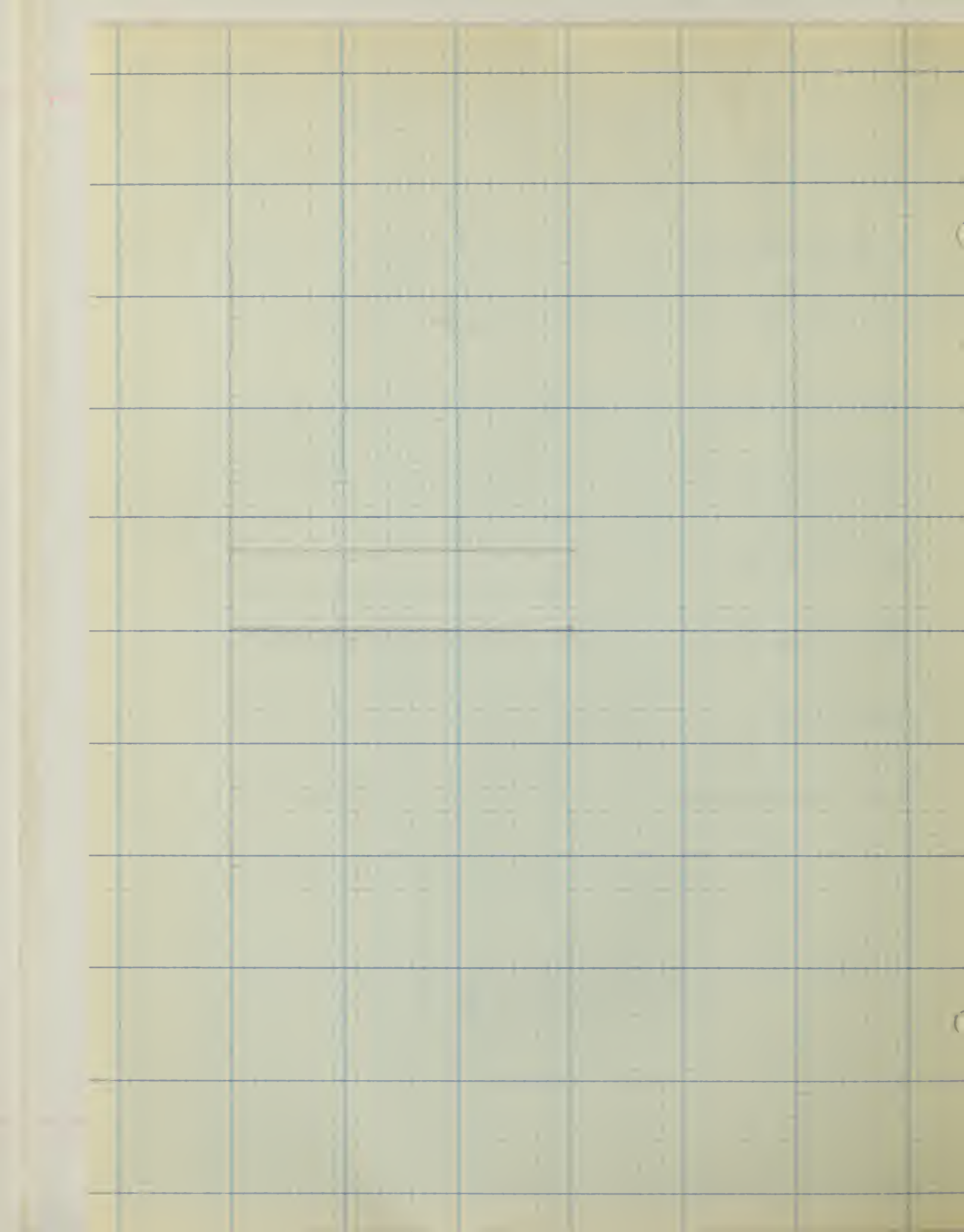


Chart 10 - showing Profile of Evaluation on Basis of Judgement. For meaning of Evaluation Figures see Text p.30



1938. Wallace W. Atwood, and Helen G. Thomas. The Earth and Its People.

This text utilizes journey geography as does Barrows and Parker. The authors subscribe to the belief that geography should begin where life relationships are simple and evident. The journeys include typical adaptations of people in cold lands, warm lands, deserts, and other basic types of regions.

Atwood and Thomas believe that children learn the meaning of physical features through visualization in map study. They, therefore, deny any need for memorization of these principles. They include no mathematical geography in this first geography of their series.

Picture study is stressed. Sub-titles are excellent and would provide for learning of geography through illustrations alone. The maps are especially good. They are designed especially for a children's text, showing clearly relative locations in respect to the entire globe. They are beautifully colored, particularly in the case of many physical maps.

Chart 11 again illustrates the belief, in the latest texts studied, that home geography is not the only or most desirable method of presentation.

Atwood - 1938

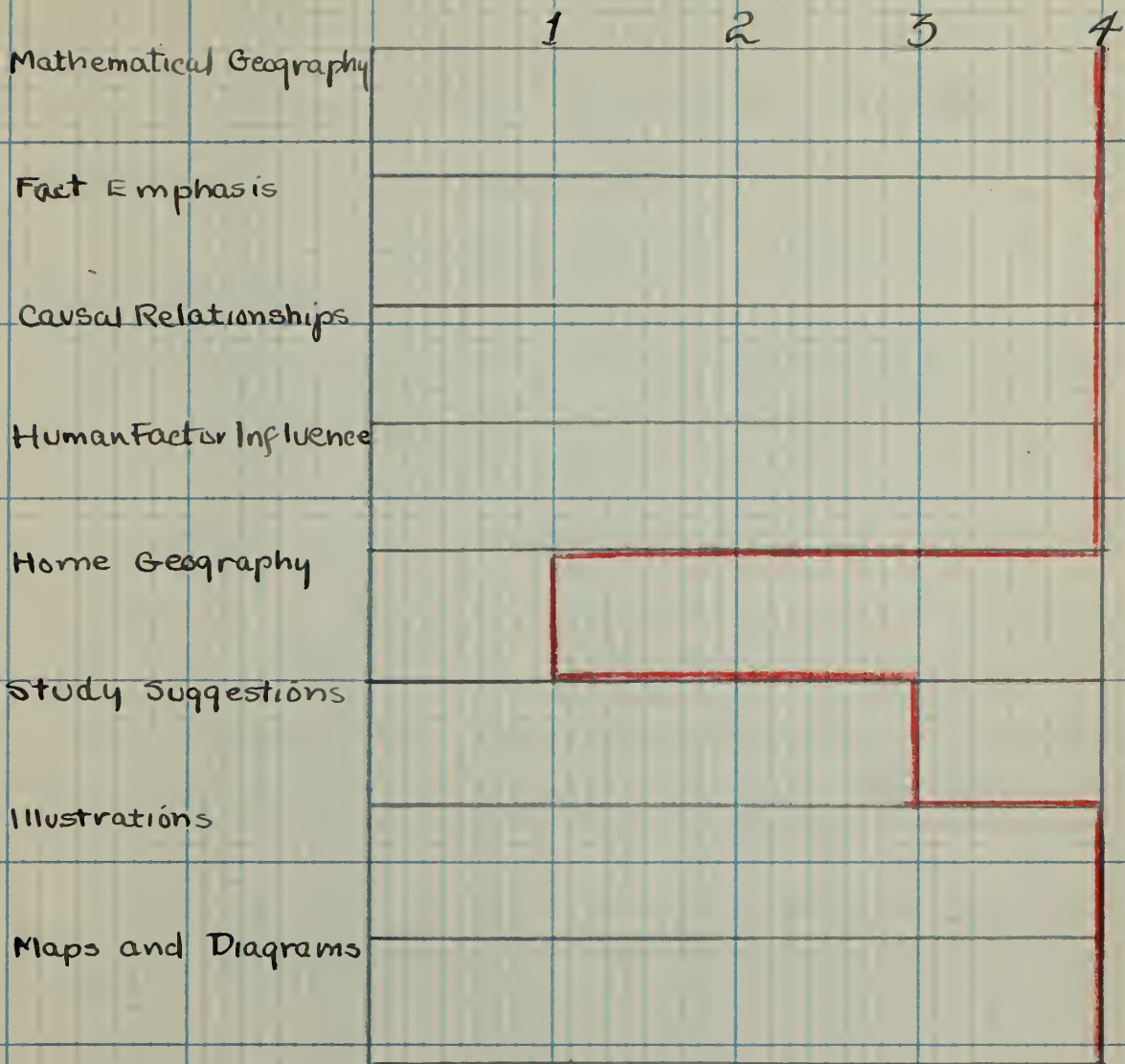


Chart 11 showing Profile of Evaluation on Basis of Judgement. For Meaning of Evaluation Figures see Text p. 30.



Chapter IV

COMPARISONS AND CONCLUSIONS

The Trend of Each Basis of Judgment Through The Books, Based on Table I.

Mathematical Geography.

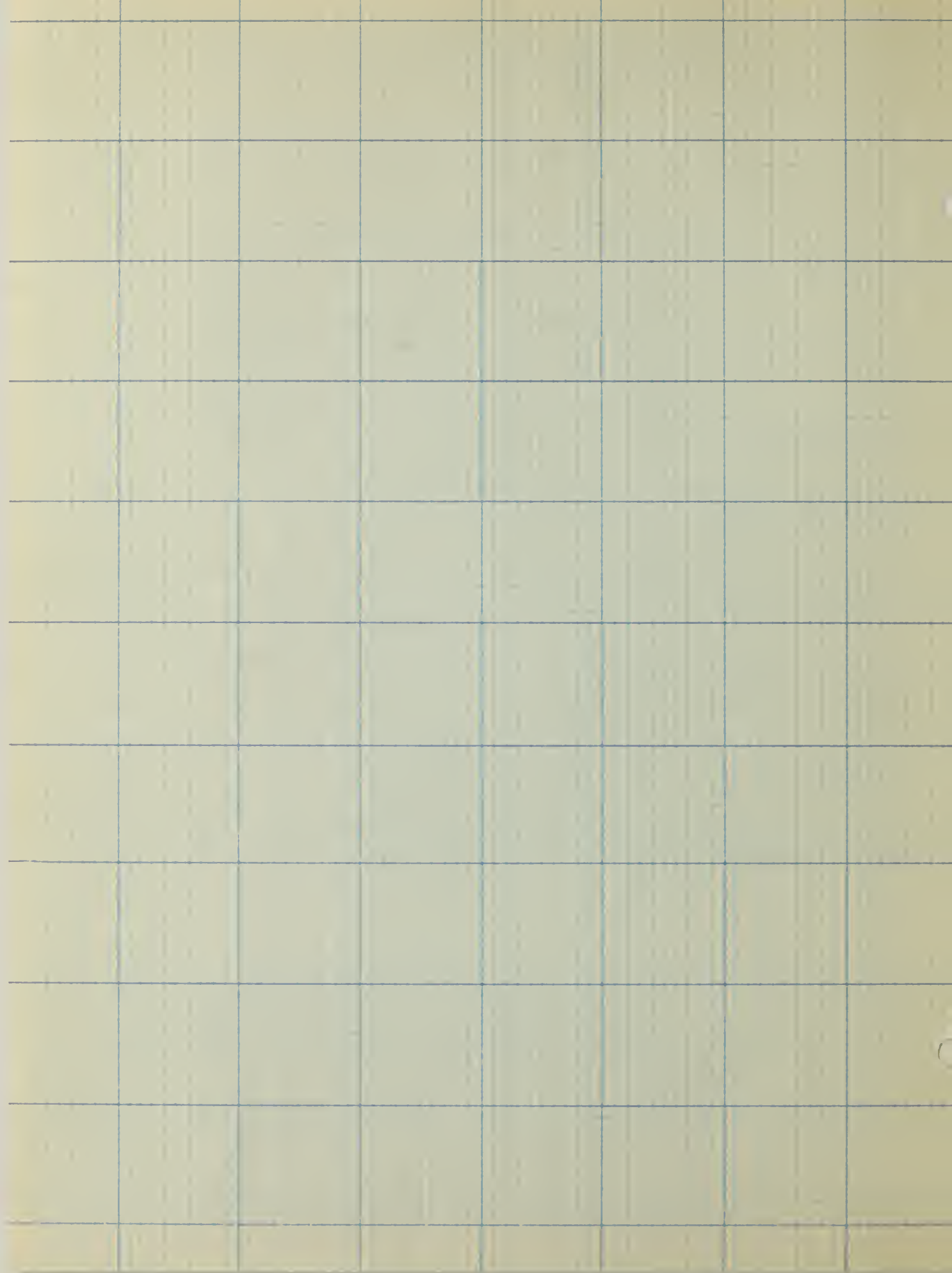
Mathematical geography, mainly astronomical, is shown to be the most important part of each subject studied only in the first two texts, Parish and Morse. After the first quarter of the nineteenth century a recession to a place of less emphasis is noticed, in the books of Worcester, Parker, and Swinton, with facts of topography, cartography and numerical significance most prominent. In these books only particular mathematical facts considered essential are required for memorization, such as the size of a particular country.

Near the turn of the century mathematical geography is found to be definitely on the wane. Guyot, Frye, and Tarr and McMurray present mathematical geography facts, but they are not required for memorization. After 1905 there is no evidence of any mathematical geography whatever. Herbertson, Barrows and Parker, and Atwood and Thomas omit completely any mathematical geography facts excepting those used in an appreciation capacity.

In the discussion on the history of the science of geography it was pointed out that in 1800, when mathematical

	Mathematical Geography	Fact Emphasis	Causal Relationships	Human Factor Influence	Home Geography	Study Suggestions	Illustrations	Maps and Diagrams	Total	Average
Parish-1814	1	1	1	1	1	2	1	1	9	1.1
Morse-1824	1	1	1	2	1	1	1	1	9	1.1
Worcester-1827	2	1	1	2	1	2	2	3	14	1.8
Parker-1855	2	1	1	1	1	1	1	1	9	1.1
Swinton-1880	2	1	1	1	2	3	3	2	15	1.9
Guyot-1890	3	2	3	3	1	1	2	2	17	2.1
Frye 1894	3	2	2	2	4	3	4	3	23	2.9
Tarr and McMurray-1905	3	3	3	4	4	3	4	3	27	3.4
Herbertson-1919	4	3	4	3	3	4	4	3	28	3.5
Barrows and Parker-1924	4	4	4	4	1	4	4	4	29	3.6
Atwood-1938	4	4	4	4	1	3	4	4	28	3.5

Table 1 - Showing Evaluation of Each Text in Regard to Each Basis of Judgement, For Meaning & Evaluation Figures, See Text p.30



geography was the most important aspect of the texts studied, Humboldt was teaching his fact geography based on his own travels and field work. The texts were in the same stage of development as the pedagogy of geography, that of the science in the fourteenth and fifteenth centuries when locations of cities, towns, harbors, and rivers made up the geography.

Fact Emphasis.

The need for learning isolated facts concerning geographic principles was catered to for a much longer period of time than mathematical geography. It may be seen that as late as 1919, with Herbertson, a few isolated facts as such were still required for memorization, and were stressed after the fashion of Humboldt in 1800. Swinton, 1880, places complete emphasis on memorization of such facts. Even in Guyot and Frye, who made such important contributions to present day progress, very few causal relationships were brought out.

Again, in regard to this basis of judgment it is revealed that the textbooks and the pedagogy of geography were approximately equally advanced. Instead of being two to three centuries behind the science, they had shortened the interval about one century.

Causal Relationships.

A discrepancy of fifty years occurs between the texts and the science in the matter of causal relationships. Kant and Ritter did their pioneer work in this field during the

middle of the nineteenth century. One text, Guyot, in 1890, sensed the value of pointing out these relationships wherever they were evident and of interest. From that time on, in varying degree, texts showed an increasing realization of the importance of relationships in geography. It is interesting to note that while a text in 1880 indicated the value of this method, it was not initiated in the schools until 1900, and not generally used until within the last few years. To say that even today there is no strictly mathematical geography and isolated fact teaching would be a gross exaggeration.

The Human Factor

In general, the human geography concept became popular in Europe at about the same time that the importance of world relationships was recognized. Parish in 1814 and Worcester in 1827, some time previous to the general prevalence, indicated an appreciation of the factor by the prominence they gave to description of the life of various peoples, although no direct relationships were pointed out. This tendency does not reappear until 1890 when Guyot evidenced the belief that the continents were made expressly for man, and showed what man had done with his heritage. Since then it has been steadily more clearly seen that geography does not exist exclusive of man, and today man is almost never omitted as a factor in geographic considerations. Even in the study of places where man has never set foot, the possibilities for human occupation and utilization form the basis of investigation. Pedagogy in

geography caught on quite fully to the importance of this principle soon after the turn of the century, when texts like that of Tarr and McMurray and, later on, Barrows and Parker became widely used and easily available.

Home Geography.

The obvious principles underlying the home geography concept, those of procedure from the known to the unknown, and preparation for living in the home community, seem very logical, and they maintain a very important and popular position in teaching geography today. The idea was most widely propounded in texts from 1894 to 1919, including Frye, Tarr and McMurray, and Herbertson. It should be noted, however, that latest trends, even as far back as Barrows and Parker in 1924, and including Atwood in 1938, indicate a complete reversal of opinion as to the value of home geography. These texts, starting first with far distant lands, are based on the assumption that the child is more likely to be interested in a land which stimulates his curiosity. His own neighborhood he considers an old story.

Study Suggestions, Illustrations, and Maps and Diagrams.

In general, the improvement in these more technical aspects of texts has been steady through the years and has been parallel to such corresponding improvements in texts of all kinds. Study suggestions have kept pace with general

education techniques. Increasingly clever statistical methods and modern photography have been responsible for two of the items. The maps have improved as cartographers have improved their art to the detailed accuracy and science of today. Germany has been producing the finest and most accurate maps in the world. It seems possible to make a general statement that each book receives about the same rating in regard to study suggestions that it receives for illustrations and maps and diagrams. One exception is Swinton, whose illustrations and study suggestions are far advanced for his time, but whose maps are not particularly suitable. Worcester's text is remarkable in that it achieves a rating for maps of excellent quality which is not again equalled until Frye in 1891. The only criticism of Worcester's maps is that there are too few of them. Such maps as physical, climatic, rainfall, production, etc., were not found until Guyot in 1890.

Summary

The Texts.

Chart 12 shows a profile of the average ratings received by the various texts. As might be expected, the trend chronologically is toward the optimum. Morse and Parish rate the lowest but that does not mean that they were of least importance or that they contributed least to the development of geography. They assume bottom positions because it is from them that we made our beginnings of progress. They laid the foundations without which no movement can build. Perhaps they should be granted the position of highest importance. They were the pioneers in geography texts which were valuable in themselves and which provided the basis for later improvement.

The improvement from 1855 to 1900 is very marked and very steady. During that time geography texts and method made their greatest strides. Since Tarr and McMurray in 1905, technical aspects of producing texts, such as size of page, illustrations, maps and diagrams, and attractive covers, have been improved. New pedagogical methods, techniques such as problem and appreciation, have been developed. The precepts of causal relationships and human geography are still followed, however, with home geography widely accepted. There have been few new basic philosophic aspects introduced. It is interesting to note that even the most modern books studied do not achieve

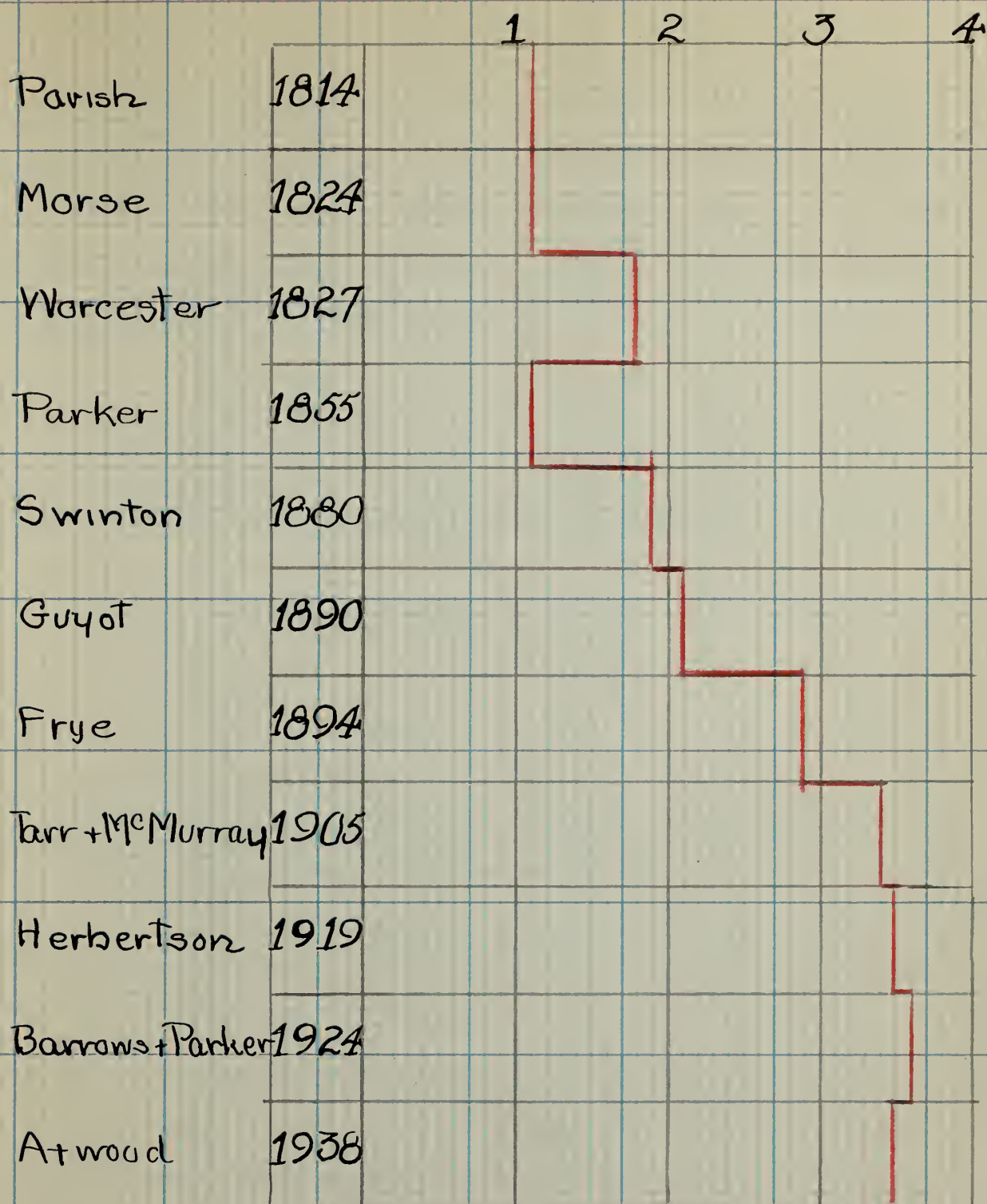
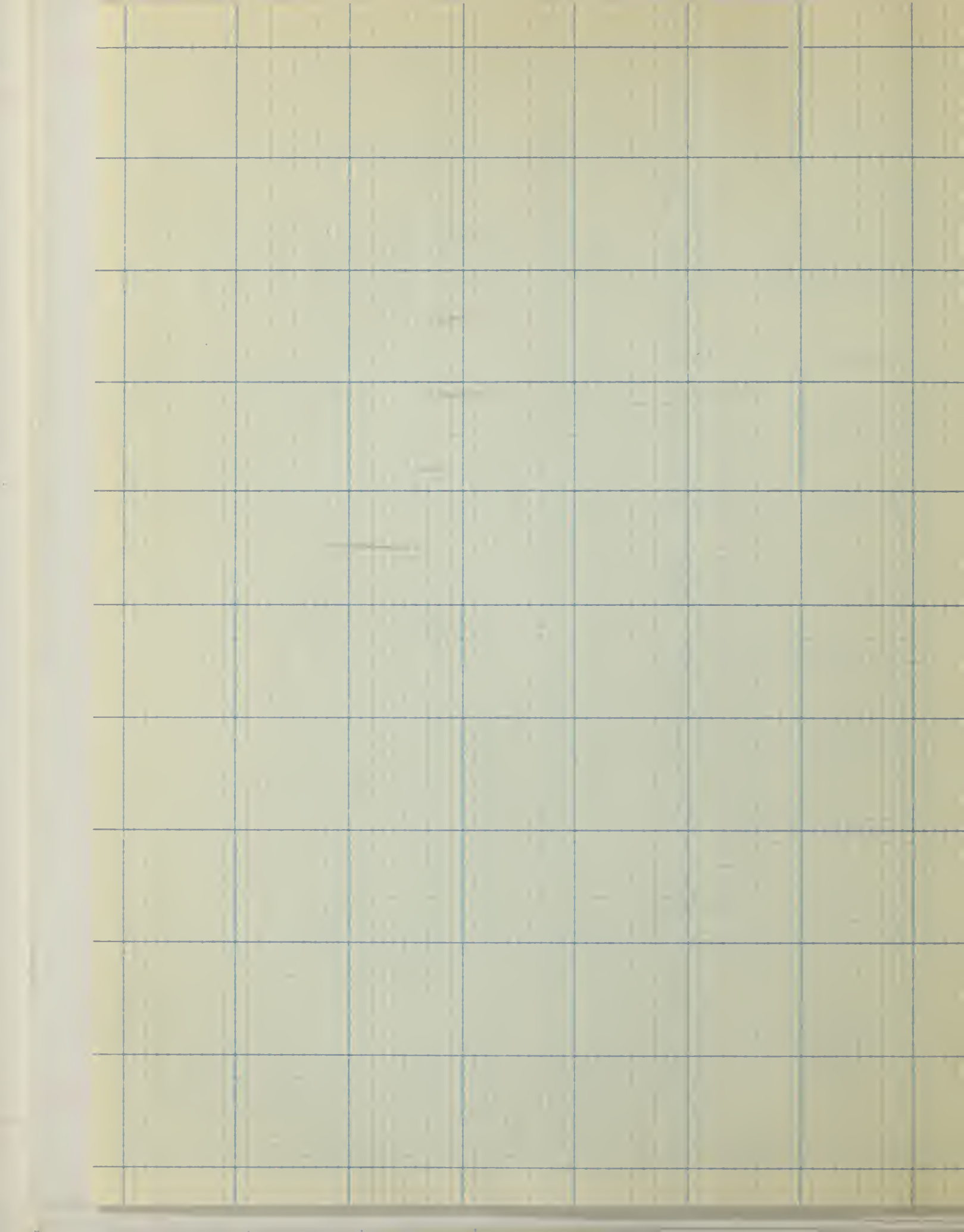


Chart 12 showing Profile of Average Evaluation of Each Text in Chronological Order, to Indicate Trend of Change Through the Years. For Meaning of Evaluation Figures see Text p. 30.



the optimum for an average rating. This is perhaps because of their difference in view on the matter of home geography. The most highly rated, Barrows and Parker, have the optimum score in every other respect and would, therefore, otherwise have achieved an optimum average.

Conclusions.

In the introduction three definite questions were raised, the answers to which it has been the purpose of this paper to discover.

The first question asked whether or not method and textbooks in geography at the time of their introduction were derived from the science of the time and were, therefore, up-to-date at the time they were used. The tracing of the history of geographic pedagogy and the study of typical texts shows definitely that both method and texts were far from up-to-date. In 1800, textbooks as typified by the famous Morse volumes, and pedagogy, confined to memory training, were two to three hundred years behind the science of geography. Since that time the interval between these phases has narrowed. The most modern and generally accepted textbooks, while they may not be perfect in regard to present day standards of pedagogy in general, seem to have accepted the best geographic principles in regard to material and emphasis. Whether it is possible to conclude that actual textbooks in use and actual methods of presentation throughout the country are equally abreast of scientific development necessitates a further study not yet

undertaken. In all probability financial straits necessitate the continued use of older textbooks in many places. Teachers not specifically trained in a background of geography must rely on the text. Much progress must still be made before geographic texts and pedagogy may be actually considered up-to-date.

The second point raised is the question of concurrence or discrepancy in the development of texts and pedagogy. The present study shows a very definite correlation in time in introduction of specific principles into texts and into method. For instance, Table I shows the greatest decline of factual emphasis and increase of human geography and causal relationships in about 1890 with Guyot and Frye. Chapter II (page 18) states that "by 1900 method had caught up to Kant and Ritter in their advocacy of the causal relationship factor...the human factor was recognized as essential."

The third question asked whether method was derived mainly from texts or whether it arose independently, from the science and from general principles of education. The concurrence in time of development in texts and method indicates a relationship between the two, especially when the number of years difference between them is contrasted with the number of years between them and development in science, from fifty to seventy-five years, is considered. To say that the method arose without influence from the principles of education which were also being constantly studied and improved through the years, would be foolish. More and more, as we approached the present,

the authors of geography texts were students of educational principles and methods. Their texts reflect their study and application. But geography was taught, as today, mainly from texts and as presented in texts. The specific concepts and methods used in geography in differentiation from the general techniques used in all subjects and in other particular subjects, were derived from the authorities on geographic method in particular. They were derived from the written expression of these authorities from their textbooks.

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ABSTRACT

All subjects in school have been subjected to change as a result of development of principles of education. Geography has undergone changes due to this cause but it has also been influenced by the great development in the body of geographic knowledge through the centuries.

There are three primary influences contributing to the child's knowledge of geography in school. They are the science of geography, geography method, and geography textbooks. The purpose of this paper is to trace the changes and developments in the body of the science of geography, in the aims, concepts, and method of teaching geography, and in geography texts, in so far as these facts tend to clarify the interrelationships in the development of all three. The reason for this delineation is to discover whether or not method and textbooks have been concurrently developed from the science; to discover also whether method and textbooks have developed concurrently; and to discover whether method has been derived mainly from textbooks or has arisen independently of texts from the science and from general principles of education.

In tracing the history of geography as a science and as a pedagogical subject one finds eras almost parallel in both.

Since men started all over in the age of discovery with what was known centuries before Christ, one may start with that time to notice developments. In the science and the school subject one finds the era of memory, when lists of names of places made up the most important factors. In the science these names were useful in encouraging travel and commerce in the fifteenth and sixteenth centuries. In the school subject they were considered useful to train the memory. In both phases of geography we find the scientific fact era, then the causal relationships era. But the times of occurrence were very different. When Humboldt was exposing his scientific data the schools were memorizing the length and breadth of lava flows. When Kant was revealing the causal relationship aspect of geography the schools were learning scientific data organized in topics.

It is encouraging, however, to realize that the discrepancies between the two divisions have been steadily decreasing, and that education is slowly catching up. It was four hundred years after the science of geography left the memory stage that education got to it. There was only about a century's difference between the eras of scientific fact. There was perhaps a difference in time of fifty to seventy-five years when education reached the causal relationship and human response milestone. There seems to be indicated a slight tendency for geographers at present to veer toward the theses of chorography, and to be swinging away from any hint

of determinism. They are placing more and more responsibility for a given human response on man's choice. In case of such a development it will be interesting to see how long the discrepancies will be before the pedagogy of geography adjusts itself to these changing conditions.

The list of texts studied and the specific reasons for choice follows:

1. Parish, Elijah. A New System of Modern Geography. E. Little and Company, Newburyport, 1814.

This book is typical of those of the author's time in memory training emphasis. Parish was an exponent of geography as distribution.

2. Morse, Jedidah, and Morse, Sidney E. A New System of Geography, Ancient and Modern. Richardson and Lord, 1824.

Morse, one of our earliest geographers, and his son collaborated on this volume. For over a century it was an authority on the subject in America.

3. Worcester, J. F. Elements of Geography. Hilliard, Gray, Little, Williams, 1827.

Worcester was one of the originators of journey geography.

4. Parker, Richard Green. Questions in Geography. Harper and Brothers, 1855.

This text is an example of entire emphasis on mathematical and factual geography.

5. Swinton, William. Grammar School Geography. Ivison, Blakeman, Taylor, and Co., New York, 1880.

This book was written during the rise of emphasis on physical geography and was meant to strike a balance between physical and political geography.

6. Guyot, Arnold. The Earth and Man. Charles Scribners Sons, 1890.

One of the earliest exponents of human geography,

Guyot wrote an otherwise typical text of the period of the rise of physical geography.

7. Frye, Alexander E. Primary Geography. Ginn and Company, Boston, 1894.

Frye wrote some of the earliest books using the topical treatment of subject and employing home geography.

8. Tarr, Ralph S., and McMurray, Frank M. A Complete Geography. Macmillan Company, 1905.

This book is famous for its progressive viewpoint. It exemplifies home geography and the famous "type study".

9. Herbertson, F. D. The Clarendon Geography. The Clarendon Press, Oxford, 1919.

Herbertson's book is extremely rich in causal relationships.

10. Barrows, Harlan H. and Parker, Edith P. Journeys in Distant Lands. Silver Burdett, 1924.

This book series is different and contributive in that the authors refute the home geography concept.

11. Atwood, Wallace W., and Thomas, Helen G. The Earth and Its People. Ginn and Company, 1938.

This book is chosen as an example of the best which has been published within the last few years.

The bases selected for the study of the text are

1. The lack of emphasis on mathematical geography.
2. The lack of emphasis on factual material as such.
3. The emphasis on causal relationships.
4. The recognition and significance of the human factor.
5. The degree of concordance with the principles of home geography.
6. The value and kind of study suggestions.
7. The quality and fitness of illustrations.
8. The quality and utility of maps and diagrams.

Morse and Parish rate the lowest but that does not mean that they were of least importance or that they contributed least to the development of geography. They assume bottom

position because it is from them that we made our beginnings of progress. They laid the foundation without which no movement can build. Perhaps they should be granted the position of highest importance. They were the pioneers of geography texts which were valuable in their error in demonstrating the possibility of improvement. The Parker text rates low because of its very nature.

The improvement from 1855 to 1900 is very marked and very steady. During that time geography texts and method made the greatest strides. Since Tarr and McMurray in 1905 technicalities have been perfected and new methods of study have been introduced. Still, however, the precepts of causal relationships and human geography are followed, with home geography widely accepted. There have been few new basic philosophies introduced. It is interesting to note that even the most modern books studied do not achieve the optimum for an average rating. This is mainly because of their difference in view on the matter of home geography. The most highly rated, Barrows and Parker, have the optimum score in every other respect and would, therefore, otherwise achieve an optimum average.

The tracing of the history of geographic pedagogy and the study of typical texts show definitely that both these educational factors were far from up-to-date. In 1800, textbooks as typified by the famous Morse volume, and pedagogy, confined to memory training, were two to three hundred years behind the science of geography. Since that time the interval

between these phases has declined.

The most modern and generally accepted textbooks, while they may not be perfect in regard to present day standards of pedagogy in general, seem to have accepted the best geographic principles in regard to material and emphasis. Whether it is possible to conclude that actual textbooks in use and actual methods of presentation throughout the country are equally abreast of scientific development necessitates a further study not yet undertaken. In all probability financial straits necessitate the continued use of older textbooks in many places, and teachers not specifically trained in a background of geography, who must rely on the text, would indicate that much progress must still be made before geographic texts and pedagogy may be actually considered up-to-date.

The present study shows a very definite correlation in time, in introduction of specific principles into texts and into method. For instance, Table I shows the greatest gain in decline of factual emphasis and increase of human geography and causal relationship importance in about 1890, with Guyot (1890) and Frye (1894). The concurrence of time of development in texts and method indicates a relationship between the two, especially when the number of years difference between them is contrasted with the number of years between the two and development in science, from fifty to seventy-five. To say that the method arose without influence from the principles of education, which were also

being constantly studied and improved through the years, would be foolish. The authors of geography texts were students of educational principles and methods. Their texts reflect their study and application. But geography was taught, as to-day, mainly from texts and as presented in texts. The specific concepts and methods used in geography in differentiation from the general techniques used in all subjects and in other particular subjects, were derived from the authorities on geographic method in particular. They were derived from the written expression of these authorities, from their textbooks.



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